

# SUPPLEMENT TO THE ILLUSTRATED LONDON NEWS

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[WITH TWO SUPPLEMENTS, 1s.

## THE WAR ON THE DANUBE.

(From our Special Correspondent.)

SCHUMLA, June 20, 1854.

THE operations of the united armies are likely to assume an active character after the lapse of another week. The entire English force is now landed at Varna, and encamped in the neighbourhood. The French will be ready with 30,000 men in seven or eight days, and they only await the arrival of General Bosquet's division of 6000 men, from Adrianople, to move forward at once. General Bosquet left Adrianople on the 15th, and is expected to reach Pravadi in two days. In the meanwhile reconnoisseances have been made by the French and English forces in the direction of Bazardjik and the Wall of Trajan; and these operations have given rise to a rumour that the first move will be made in the direction of Tussla—a place situate on the coast, in the centre of a bay of that name, at the point where the old Roman lines touch the sea. It is also added, that such a movement as that just mentioned is rendered necessary by the position of the Russians, who have directed a large portion of their main force hitherto in the vicinity of Karasu, towards the chain of lakes which defends the entrance to the Dobrudja, between Karasu and Rassova.

The Turkish force continues to move in the direction of Siliestria, and though they are no great distance from Schumla, they were ready to move forward at a moment's notice. This morning, Captains Burke and Bent, of the Engineers, left this place for Siliestria, which they are to help in defending. The Russians have not made any assaults on this place since the day when Rifaat Pacha entered the town, and that is now a period of twelve days ago. On that occasion they had been informed of the intended entrance of the new Governor into Siliestria, and they attacked him on his way in, but the entrance was made good. Later, thinking to take advantage of the confusion likely to be caused by the arrival, the Russians assaulted the Arab Tabia, but were again repulsed. In order to understand the persistence of the enemy in attacking this point, it is necessary to explain in some sort the position which it occupies with reference to the town. Siliestria is situated on a bend of the Danube, the bank of which forms a segment of a circle. At 2500 yards outside, as the Danube flows, is the extreme point of a hill, on which is situated the Arab Tabia. Nearer Siliestria, and on the side of the same rising ground, is another fort, called the Illanli Tabia. This latter outwork has also been frequently assaulted by the Russians as unsuccessfully as the Arab Tabia. It was discovered not long since that the enemy had made a covered way leading to the Illanli Tabia. The Turks sallied out and filled it up. The Arab Tabia itself, which was large enough to contain 2500 men, has been so damaged by shells, that an immense redoubt has been made, with a fosse and parapet of high profile. The new redoubt, however, is not large enough to contain more than 1000 men. For fear the Russians might succeed in making their way between the Illanli and the Arab Tabia, the Turks have also made a new redoubt midway between the two, and a little in the rear.

There is no news of any important engagement, except the assault on the day of Rifaat Pacha's entrance. But the attack on that day is said to have cost the life of two Russian Generals, Pauloff and Selvan.

Bairam Pacha, who had made his way into the besieged fortress, has left it, with his brigade, in the direction of Toutracan, where, as my last letter informed you, several battalions of Russians have landed. To-day the troops hitherto concentrated at Tirnova will march in here, bringing their prisoners and guns taken near Slatina.

## CAMP LIFE AT VARNA.

THE several Correspondents from the seat of the war agree as to the immense extent of the camp of the Allied troops collected under the walls of Varna, though Canrobert's division of 10,000 men is away some six miles off, near the camp of our light infantry division. The greater part of the 3rd division of Prince Napoleon has landed, and several French regiments have arrived overland from Bourgas, and are under canvas a little to the north of the town, between the tents of our troops and those of the Egyptians and Turks. Next to these are posted the division of Sir De Lacy Evans, with the 55th Regiment; and south of these again come the Duke of Cambridge's division of Guards and Highlanders, with troops and batteries of horse and field artillery. Below all, and close upon the shores of the lower lake, are some 5000 Turkish cavalry and infantry, with a force of about 40 pieces of artillery. Four complete Turkish regiments, 1500 strong, have also joined the camp of their fellow-countrymen. Altogether, the force now here cannot be far short of 55,000 men of all arms, of which 20,000 are English, 22,000 French, and about 12,000 Turks and Egyptians. When the rest of our cavalry and Sir R. England's division arrive, with the French who are *en route*, we shall move from here some 80,000 strong; and, with the Turkish contingent under Omer Pacha, are likely to take the field upon the Danube with an effective strength of 120,000.

The routine of a day in camp is thus described:

Between six and half-past six o'clock the seven regiments parade, each in front of their own encampment; but nearly two hours before that time, the stranger, unaccustomed to the sounds of the camp, if he has been able to sleep through the challenges of the sentries along the lines, and the monotonous cry running from man to man, "Number One! All's well!" "Number two! All's well!" &c., will be awoken by the bugles and trumpets sounding the *revel*, the noise of conversation around his tent, and the chopping of wood for the camp fires. Parade over, there is a general rush for breakfast, which takes place at eight o'clock.

The heat in the day is great; but, perhaps, it does not much exceed the average temperature of a fine sunny day in England about the same time of year. The nights are colder, and heavy dews are frequent. When recall is sounded, and all the bands have ceased playing, the silence which reigns over the camp would be profound; but that the vigorous breathing of the sleepers frequently attain the dimensions of snoring, and that the challenges of the sentry to the stragglers for half-an-hour or

so are frequent. Ere dusk, outlying pickets are appointed, and reliefs are sent out about half-past two o'clock in the morning. These pickets are posted around the camp at the distance of two or three miles.

The accompanying Illustration, from a Sketch by Lieut. E. C. Gordon, R.E., shows the accommodation afforded by an officer's camp to a few dinner guests.



INTERIOR OF AN OFFICER'S TENT, AT VARNA.

## FORTIFICATION AND SIEGE OPERATIONS.

A FEW NOTES—HISTORICAL AND DESCRIPTIVE,  
FOR GENERAL READERS.

In devoting a few columns to the subject of Fortification and Siege Operations, it is almost unnecessary to state that we shall not pretend, within such restricted limits, to go into technical details, in a manner to be practically available, but simply to give such a popular view of general principles, and such explanation of the nomenclature employed, as may assist the reader to understand the accounts of military operations which are likely to be produced in the course of the war.

Fortification is of two kinds: Permanent Fortification—being the permanent structures erected for the defence of towns, citadels, &c.; and Field Fortifications—being works temporarily erected for the defence of a position in the course of a war. We shall restrict ourselves, on the present occasion to what concerns permanent fortification; and so much of field fortification as is involved in siege operations undertaken against a permanently fortified place.

*Ancient Fortification.*—Before describing the system of fortification, and of siege operations in present use, it may be proper to glance briefly at the ancient system—that in vogue, with but slight modifications, from the earliest period of history down to the time of the invention of gunpowder. The defence of a town consisted, in those days, for the most part, of high walls surrounding it, with the addition of towers at the angles, for the purpose of commanding the lines of front on either side; and *machiholes*—a species of galleries running along the top, from which missiles could be hurled down upon the besiegers, should they approach near enough. A wide and deep moat, with a drawbridge over it, and a *barbican*, or fortified gateway, at the exterior end of the latter, completed the permanent main works.

The mode of attack was either by scaling the walls, or undermining them, or battering them down, wholly or in part. The first operation was attained by means of mounds of earth, called *aggeres*, erected near the walls, and piled up high enough to allow of a bridge being thrown across from them; or of raised stages, or galleries, moving upon wheels, called a *vinea*, upon which scaling parties were brought to the very crest of the fortification. Innumerable examples of such works are found in the records of ancient history; and the recent discoveries in Nineveh bring to light illustrations of them which are highly curious.

On the other hand, the defensive operations of the besieged consisted chiefly of hurling missiles from the walls at the besiegers, and of frequent sallies, for the purpose of still further disturbing them, and also of destroying their offensive mounds and moving galleries—against the last of which fire was frequently employed.

To conclude this brief sketch of an order of things long superseded, but of which the pages of Homer, Josephus, Tacitus, and the Holy Scriptures themselves, contain so many illustrations, it may be observed, as a principle, that the art of defence in ancient fortification had the advantage over that of the attack; the latter requiring great numerical superiority, and unwearyed labour and patience on the part of the besiegers in effecting their approaches, as well as immense physical energy and dauntless courage in the final assault, when the besieged still fought upon equal terms with them.

The discovery of gunpowder, though it at once effected considerable changes in military operations generally, did not so soon lead to any material alteration in the principles of fortification. The matchlocks and small field-pieces of early construction presented no new terrors against stone walls which had long stood the test of ballista and catapulta; and, for some ages, those arms were only used in conjunction with the latter. The most remarkable instance of this admixture of systems was the memorable siege of Constantinople, by the Turks, in 1453, so splendidly described by Gibbon ("Decline and Fall," chapter 68). Fourteen batteries of guns, among which were three pieces capable of throwing stones weighing from 600 lb. to 1200 lb., were pointed against the double walls and towers of ancient Byzantium; but, employed in addition, were engines for throwing darts, and rams for battering walls; and the broad ditch being at length filled up, a moveable turret was advanced on rollers up to the walls, where, however, it was destroyed by the fires of the besieged. The guns of the Greeks are said to have been of small calibre, the ramparts not being broad nor solid enough to permit the use of heavy artillery upon them.

In course of time, as the calibre of artillery became greatly increased, and iron balls were substituted for blocks of stone, it became apparent that the system of defence must be altered to meet these more formidable weapons of assault. As a principle, it was soon discovered that, beyond a certain point, fortifications derived no additional strength or security from the height of their walls, which battering cannon could effectually breach; but rather in extending the defences laterally—that is, in width—by extended ditches and outworks, so as to keep the besiegers at a greater distance; the ramparts being reduced to a lower level, so as to be as far as possible concealed and protected by the extended outworks.

Nevertheless, the changes so suggested were not suddenly effected; the first attempts to meet the new difficulty, as evidenced in the works of the fifteenth and sixteenth centuries, were rather to add to and remodel portions of existing fortifications, in which the lofty walls and angle-towers, and the ancient drawbridge, with its barbacan appendage, were still retained. At the siege of Metz, for instance, A.D. 1552, the Duc de Guise, who commanded, raised mounds of earth outside the single turreted wall of the town, with parapets formed of large gabions, upon which to plant cannon; and within the walls, which were breached by the enemy in several places, he erected retrenchments of earth, strong enough to resist cannon-shot.

*The Bastion System.*—At length a new and important change took place in the very principles of fortification, by the introduction of the bastion and its ravelin. And here it must be explained that the portion of straight wall between two towers, or fortified angles, is generically styled a *curtain*; and it soon became apparent that the ancient towers were no longer able to protect these portions from the artillery of the besiegers. The plan then adopted, was to substitute for the towers large earthworks, called *bastions*, having two faces and two flanks each; and to construct between each pair of bastions, and in front of the curtain, another projecting earth-work, called a *ravelin*, in level somewhat lower than the bastions, the guns of which should "cover" the approach to the bastions themselves, whilst they directly defended the approach to the curtain.

We owe the first attempts at the bastion system to Italian engineers, and their example was afterwards followed in the Netherlands, France, and in the Continent generally. Amongst the earliest who treated on the subject, and with success, were Castriotto, Marchi, Errard de Bar le Duc, de Ville, and Count de Pagan; but it was Marshal de Vauban (a distinguished General, under Louis XIII. and XIV.) who first reduced it to anything like order, and laid down mathematical rules for the direction and proportion of all the lines under all circumstances. The plan he proceeded upon was to inclose the place to be fortified within straight lines, forming a polygon, and to treat each line of the polygon as a base of fortification; to be flanked by bastions, the curtain lying between. The length of the side of the polygon under his rules varied from 300 to 500 yards; in order that the whole might be commanded by the artillery in the bastions. De Vauban built no less than thirty-three new fortifications, besides improving no less than 300; and, in the course of so doing, invented three systems, or rather

added to his first system, at two successive periods, additional works, with a view to prolong the defence after a first breach should have been made.

*Vauban's First System.*—We now direct the reader's attention to a diagram of what is termed a *front of fortification*, upon Vauban's first system; which comprises all the main works common to every front of fortification. We should here explain, that a front of fortification comprehends all works raised upon one of the lines of the polygon surrounding the town, as a base; and in this case consists chiefly of two half-bastions and a ravelin, or demi-lune:—

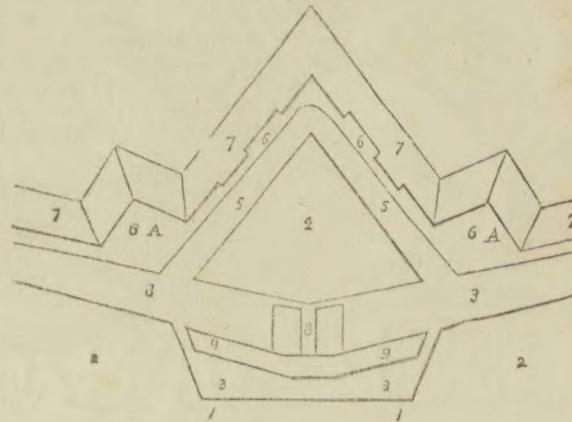


Fig. 1.—FRONT OF FORTIFICATION UPON VAUBAN'S FIRST SYSTEM.

Here 1 1 is the *Curtain*; 2 2 are the two *Half-Bastions*, their flanks adjoining and projecting from the curtain, and their faces looking out towards the exterior; the *Main Ditch*, 3 3 3, runs along bastions and curtain in a continuous line; 4 is the *Ravelin*, or *Demi-Lune*, having only two faces (and no flanks), being situated on the exterior side of the main ditch, but having a ditch of its own (5 5), which communicates with the main ditch. Beyond the main ditch and the ravelin ditch, is (6 6 6), the *covered way* being a raised ground intended for the movements of the soldiers in the work of defence, and protected by the crest of the *glacis* (7 7), which is the outer ground of all, sloping down gradually to the open country. The large spaces in the covered way (6a 6A) are called *Places of Arms*, for the assembling of the troops: that at the apex is termed the *Salient Place of Arms*, from its position at the apex; the other two, marked 6a, *Re-entering Places of Arms*, from being placed in the *re-entering angle* of the counterscarp; (8) is the *Caponnière* a small work, consisting of a double parapet, communicating between the gorge or rear of the ravelin, and the *Tenaille* (9), a low work in the ditch in front of the curtain and between the flanks of the bastions, serving for the protection of the troops in moving from one place to another after a breach has been effected in the shoulders of a bastion. The tenaille is only used as the mode of communication with the ravelin when the ditch is a dry one; when it is a wet one, bridges have to be used instead. All within the main ditch is termed the body of the place, or *enceinte*; the works without the main ditch—the ravelin, covered-way, caponnière, tenaille, &c.—are termed *outworks*. The great principle involved in this system is that all the works mutually protect one another: the fire from the faces of the ravelin scour the country in front of the faces of the bastions, whilst the fire of the faces of the bastions commands the ditch of the ravelin, and the glacis; and that of the flanks thereof commands the main ditch, scouring the approaches to the curtain.

It may here be explained, that all angles projecting outwards from the body of the place are called *salient angles*; and all angles projecting inwards, towards the body of the place, are called *re-entering angles*. Thus the two faces of the ravelin form a salient angle; the same with the two faces of the bastion; the same with one of the faces and the adjoining flank of the bastion; but the flank of the bastion, with the curtain, forms a re-entering angle. The whole extent of rampart comprehending the right face and right flank of one bastion, and the left flank and left face of the opposite bastion, and the curtain between them, is termed a *front of fortification*, or *line of defence*.

Works intended for mutual defence should never exceed an angle of 120 deg., nor be less than one of 60 deg. The medium of 90 deg., which forms a right angle, is generally considered, the best for the above purpose. Where batteries stand at such an opening that their direct fire, or that which is vertical to their face, is parallel with the front of the part they flank, it is called *razante*, or grazing fire; but when the angle is less than 90 degrees, so that the direct fire would

strike upon the face of the work to be defended, it is termed *fichante*. When two lines form a very acute angle with each other, they no longer are defences; for, in case the enemy should take either of them, he would be able to work its battery against the other.

*Vauban's Second and Third Systems.*—When Vauban introduced the simple system of works for mutual defence, above briefly described, the art of attack was very little improved upon the old method. The artillery was still brought to bear, as heretofore, directly upon the faces of the bastions and ravelin, and pursued the work of attack laboriously and slowly, exposed all the while to the fire of the besieged, from positions much superior to those temporarily thrown up by themselves. In short, the defence still maintained the superiority against the attack. It was Vauban, himself, who, after methodising his first bastion system, devised a system of attack which completely set at defiance all the precautions upon which it was based, and gave the attack a decided superiority. At the siege of Philipbourg, A.D. 1688, this great commander (acting, it is surmised, upon a hint derived from observation of the operations of the Turks at the Siege of Candia, some years previously), determined to alter the position of his batteries, placing them at right angles to and opposite the prolongations of the faces of the works; and then so regulating the charge and elevation of his guns, that the shot, instead of striking the battery point blank, should sweep the whole length of the covered-way, and within the palisade; and, by frequent bounds, dismount the guns, and place the defences *hors de combat*. This mode of firing is called the *ricochet*, and is a species of *enfilade* firing; the only difference being, that in it the charge of powder is considerably less—a half, or even a quarter charge—and the gun a little elevated. So successful was this mode of firing found to be, that a few years afterwards (1697) Vauban, by means of it, took the fortress of Ath—which he had himself constructed, and which he considered his masterpiece—after thirteen days of open trenches; with a loss of only 50 killed and 150 wounded.

It was to counteract this terrible mode of attack that Vauban introduced *traverses*, or projecting parapets, across the covered way (to be shown presently in Fig. 2) which had some effect; but not sufficient, by any means, to balance the powers of attack and defence; and the great engineer saw the necessity of resorting to further complications for protecting a portion, at least, of the *garde*, from the terrible ricochet-fire; and additional works, for defending the *enceinte* after a breach had been formed in the face, or shoulder of a bastion. In his second system, which he employed at Landau and Belfort (1684 and 1688), he separated the bastions from the body of the place by a ditch, about forty feet wide, in order to enable the latter to make a second defence; and fortified the angles of the bastions by small pentagonal towers of masonry, called *tower-bastions*, under which were casemates for two guns, &c. In his third system, employed at Neu Brissa ck (1698) he increased the size of the ravelin, and added to it a redoubt; and also increased the size of the tower-bastions, and altered their arrangement, and that of the casemates.

*Coehorn and Cormontaigne.*—Coehorn, who was contemporary with Vauban, introduced some additional variations upon his system, which, however, it is not very important here to particularise, as the best of them are comprised in the modern system, shortly to be noticed. We pass on to Cormontaigne, who, about thirty years after Vauban's death, was the author of some very important changes, the usefulness of which is generally acknowledged. In the first place he lengthened the faces and shortened the flanks of the bastion, which gave greater space for interior defence within the work itself, and also brought the flank closer to the object which it had to defend. In the second place he reduced the width and extended the projection of the ravelin, making it more salient, so that it should cover the central part of the *enceinte*, and give better defence to the bastions, inasmuch as it thereby became impossible for an enemy to cover the glacis of a bastion till he had got possession of the two collateral ravines, on account of the reverse fires, which, from these, might be made upon him in his approaches. Thirdly (not to go into minor particulars), he increased the size of the redoubt of the ravelin, to which he added casemated flanks, from which the besieged might be enabled to have a reversed fire upon the besiegers, when the latter, after making a breach in the bastion, should be about commencing the assault.

*The Modern System.*—Not to particularise each succeeding improver or improvement we now proceed to give a general sketch of a portion of a fortification, upon what is called the modern system; that is the method of Cormontaigne—itself an improvement upon the systems of Vauban, with such additions as modern engineers have thought it proper to introduce, and which are usually adopted. Some additions to those systems, which are only occasionally adopted, we shall, in this description, disregard. The portion here represented comprises two bastions, a ravelin, and two half-ravelins, illustrating the command of the latter over the bastions just spoken of.

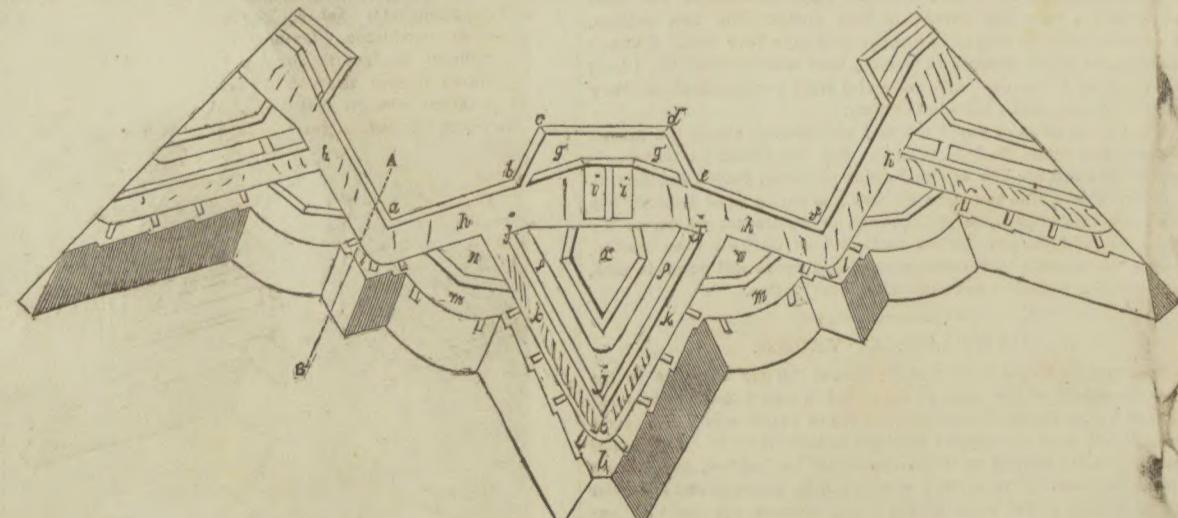


Fig. 2.—PLAN OF FORTIFICATION, ON THE MODERN SYSTEM.

Fig. 2 is a plan of the work, and Fig. 3, a section across the points A B, that is from the salient angle of the bastion to the glacis; and Fig. 4, a section through the curtain, tenaille, and salient angle of the ravelin.

In Fig. 2, the portion a b c d e is a front of principal works, com-

prising two half-bastions and a curtain, the raised ramparts within which are formed of the earth dug out of the main ditch, h h h; g g is the tenaille; i i, the caponnière; j j j, the ravelin; k k k, the ditch of the ravelin; l l l, the covered way; m m, the re-entering places of arms in the covered way; n n, redoubts, in order to increase the strength of the

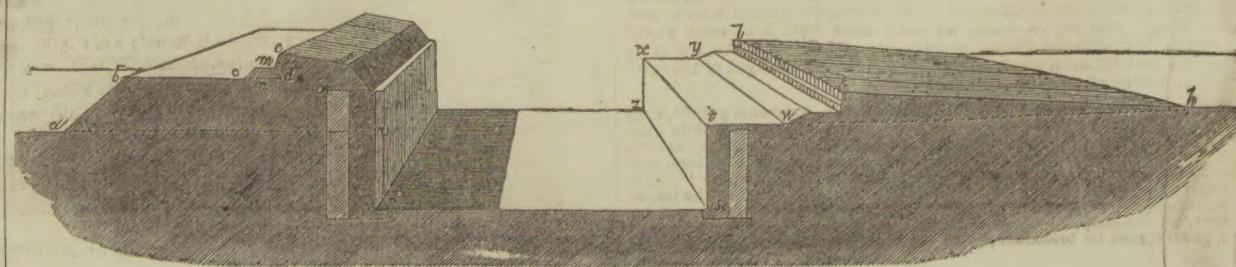


Fig. 3.—SECTION OF BASTION-RAMPART, MAIN DITCH AND GLACIS.

covered way, and to facilitate the making of sorties upon the enemy. The descents into the ditch, by which these sorties are made, are generally inclined planes, called *rampes*. Within the ravelin are *coupures*, or cuts, marked *p p*, to prevent the enemy taking the redoubt of the re-entering place of arms, before the redoubt of the ravelin itself is taken.

In Fig. 3, *b c d* is the *terre-plain* of the rampart, upon which are placed the troops and cannon for the defence, and which is generally from 30 to 40 feet broad; within which *terre-plain*, *c m*, is the *banquette*, or step, on which the soldiers stand to fire through the embrasures in the parapet, the height of the latter, *d e*, being so regulated as to afford sufficient cover for the cannon and men. The superior slope of the parapet, *e f*, is directed to the edge *t* of

the opposite side of the ditch, so as to command the covered way *t w*; *f i* is the exterior slope of the parapet, made of earth, and about equal in height to the width of its base; *i r y*, is the *revetment*, or wall-facing of the parapet, which is strengthened within at intervals by buttresses, or *counterforts*, *o p*; the front of the parapet which is thus reveted with brickwork is called the *escarp*, as the reveted front on the opposite side of the ditch, *x z t s*, is called the *counterscarp*, the front of which is also supported by a facing of masonry: *t w x y*, is the covered way for the occupation of troops for the defence, and which is usually limited to 30 feet in width. The mass *w l h* is the *parapet* of the covert-way; and the superior slope *h k* the *glacis*, which descends till it meets the natural level of the country at *h*.

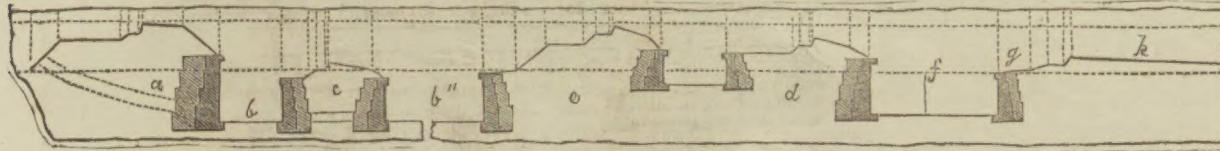


Fig. 4.—SECTION OF CURTAIN, TENAILLE, RAVELIN, AND GLACIS.

In Fig. 4, *a* is the *curtain*, with its *postern* running through it; *b b'* the main ditch (the *caponniere* being situated at the point *b'*); *c*, the *tenaille*, with its *postern*; *d*, the *ravelin*; *e*, the *redoubt* of the *ravelin*; *f*, the ditch of the *ravelin*; *g*, the *covered-way*; and *h*, the *glacis*.

*Objections to the Bastion System.*—The Bastion system has been much opposed from an early period, and its merits are still in dispute—as indeed, is the very principle of continuous lines of fortification—a point which we shall refer to presently. To complete our historical sketch, however, it is proper here to mention the name of Montalembert, a French General, who, in 1776, published a work, in eleven quarto volumes, promulgating an entirely new system of defence, the main principle of which was, that of abandoning the Bastion system, and in its place substituting one of alternate salient and re-entering angles; the

enclosures within the main ditch being multiplied, and casemated for the better protection of the troops, material, and stores. At the period of the French revolution, Carnot, a great admirer of Montalembert, proposed to improve upon his system, and still further to increase the advantages of the defenders, by affording the means of making powerful sorties, and discharging volleys of stones, balls, shells, &c., from mortars fixed from elevated casemated ramparts; of one of which we give a representation in section.

We have hitherto chiefly confined ourselves to a description of the works immediately enveloping the spots fortified; we now proceed to say a few words about the means by which the strength of such fortifications may be increased; or those descriptions of works which are used, when occasion suits, but which do not all necessarily enter into every scheme of construction. In so doing, we shall give the definition of one or two technical terms which have entered, without explanation, into the foregoing account.

The Additional Works for strengthening a Fortress may be either interior or exterior.

Interior retrenchments consist of small fronts of fortification within the *enceinte*; for the prolonging of the defence, after the outworks have been carried, and also for the retreat of the garrison, as they are driven in step by step. The *redoubt* has already been mentioned in connection with the *ravelin*, and the places of arms in the *covered-way*. The *cavaliere* is an elevated work in the *enceinte* of a fortress, commonly within a bastion, to give a command over the enemy. A *barbette* (Fig. 6.) is a raised platform near a parapet, to enable the guns to fire

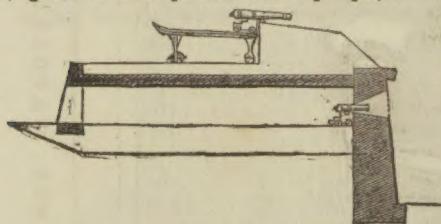


Fig. 5.—CASEMATED RAMPART—CARNOT.

over its crest instead of through the embrasures; guns so placed are said to be in *barbette*. *Casemates* (Fig. 6.) are vaults of brick or stone to cover artillery, or to lodge troops,

generally formed in the mass of the rampart, and always bomb-proof; towers, bastions, &c., are said to be casemated when they are so covered in, and the guns thereby protected, instead of being exposed in open ramparts. *Counter-guards* are works solely destined to cover others of a more important character, in such a manner that, without obstructing their fire, they shall preserve them from being breached until after the counter-guards themselves have fallen. Interior retrenchments are better adapted to spacious than small works; as, where the area of the *enceinte* is already restricted, the addition of them would tend further to impede the free circulation of the troops.

Exterior works are more appropriate to small fortifications generally, and are of use in all cases where it becomes necessary to occupy some space contiguous to or at a short distance from the main fortification, and whether it be on the same or another level. Of exterior works, *advanced works* are such as are constructed beyond the *covered-way* and *glacis*, but within the range of musketry of the main works, and *detached works* those which are situate beyond the range of musketry, and are, consequently, left chiefly to their own resources. A *horn-work* consists of two half bastions and a curtain. A *crown-work* is composed of a bastion and two half bastions, and presents two fronts of fortification. Double *crown-works* consist of two bastions and two half bastions: when these works are connected with the main works by their extreme fronts, the name *couronne* is given to them. An *advanced covered-way*—that is, a *covered-way* beyond the *glacis*—is of use in many cases: a common application of it is in the case of a rivulet passing along the foot of the *glacis*, when, a *covered-way* being formed on the other side of the stream, favours the garrison in making sorties, and watching the enemy's movements. *Lunettes* are a species of *ravelin* or *bastion*, which are found attached to the faces of *ravelins*, upon the salients of the *covered-way*, and in other like positions, commanding and protecting the same.

*Defensive Mines* are an important contrivance for counteracting the operations of the besiegers. They are passages, called *galleries*, constructed under the wall of a rampart, or extended sometimes beyond the out-works, for the purpose either of blowing up the works and ground above, or of listening to the operations of the enemy. Should the enemy be employed in mining towards the fortress as a means of attack, the besieged, being already possessed of a good system of mines, have generally the advantage of him in this particular.

*Siege Operations.*—The taking of a fortified place may be attempted either—1st, by surprise, or *coup-de-main*; 2nd, by sudden assault; 3rd, by blockade out of reach of gun-shot; or, 4th, by regular siege. We shall confine our remarks to the last-named process, of which the following admirable general description is extracted, in an abridged form, from the Preliminary Observations on the Attack of Fortresses in the first volume of Sir John Jones's "Journals of Sieges":—

When a place is provided with exterior forts that keep the enemy at a distance, and has a brave garrison to defend the approaches to it, no fear need be entertained of the rockets and bombs of the besieger. All the efforts of an engineer should be directed to give to fortresses the exterior means of resistance. In my opinion, a place that has only a simple bastioned *enceinte*, with a continued *covered-way*, but which is, at the same

time the distance of 600 yards from the fortifications, and not straitened for space, the work can readily be performed by the ordinary soldiers of the army. The second period is, when the road arrives within a fair range of musketry, or 300 yards from the place: then it requires particular precautions, which, however, are not so difficult but that the work may be executed by soldiers who have had a little previous training. The third period is, when it approaches close to the place—when every bullet takes effect—when to be seen is to be killed—when mine after mine blows up the head of the road, and with it every man and officer on the spot;—when the space becomes so restricted that little or no front of defence can be obtained, and the enemy's grenadiers sally forth every moment to attack the workmen, and deal out destruction to all less courageous or weaker than themselves.

Then the work becomes truly hazardous, and can only be performed by selected brave men, who have acquired a difficult and most dangerous art, called *sapping*, from which they themselves are styled *sappers*.

An indispensable auxiliary to the sapper is the miner; the exercise of whose art requires even a greater degree of skill, courage, and conduct, than that of his principal. The duty of a miner at a siege is to accompany the sapper to listen for and discover the enemy's miners at work under ground, and prevent his blowing up the head of the road, either by sinking down and meeting him, when a subterraneous conflict ensues, or by running a gallery close to that of his opponent, and forcing him to quit his work by means of suffocating compositions, and a thousand arts of chicanery, the knowledge of which he has acquired from experience. Sappers would be unable of themselves, without the aid of skilful miners, to execute that part of the covered road forming the descent into the ditch; and in various other portions of the road, the assistance of the miner is indispensable to the sapper: indeed, without their joint labours, and steady co-operation, no besiegers' approaches ever reached the walls of a fortress.

A siege scientifically prosecuted, though it calls for the greatest personal bravery, the greatest exertion, and extraordinary labour in all employed, is beautifully certain in its progress and result. More or less skill or exertion in the contending parties will prolong or shorten in some degree its duration; but the sapper and the miner, skilfully directed and adequately supported, will surely surmount every obstacle.

The accompanying Engraving illustrates the system of siege approaches; and requires but few words of additional explanation. The three parallels, with their batteries, will easily be distinguished. The approaches between the parallels are made by zig-zags so contrived as to be out of the direction of enfilading fire from the ramparts, and with retiring places in which the covering parties protect the working parties in case of sorties by the besieged. On approaching nearer than the second parallel, the danger of the fire from the fortifications becomes greatly increased; and the angles of the zig-zags are rendered more acute in consequence; and for the same reason, and in order to command a better fire upon the batteries of the defenders, demi-parallels are constructed between the second and third parallels. From these the approaches become still more hazardous, and the third parallel, which it is absolutely necessary should be continuous, is formed by the pro-

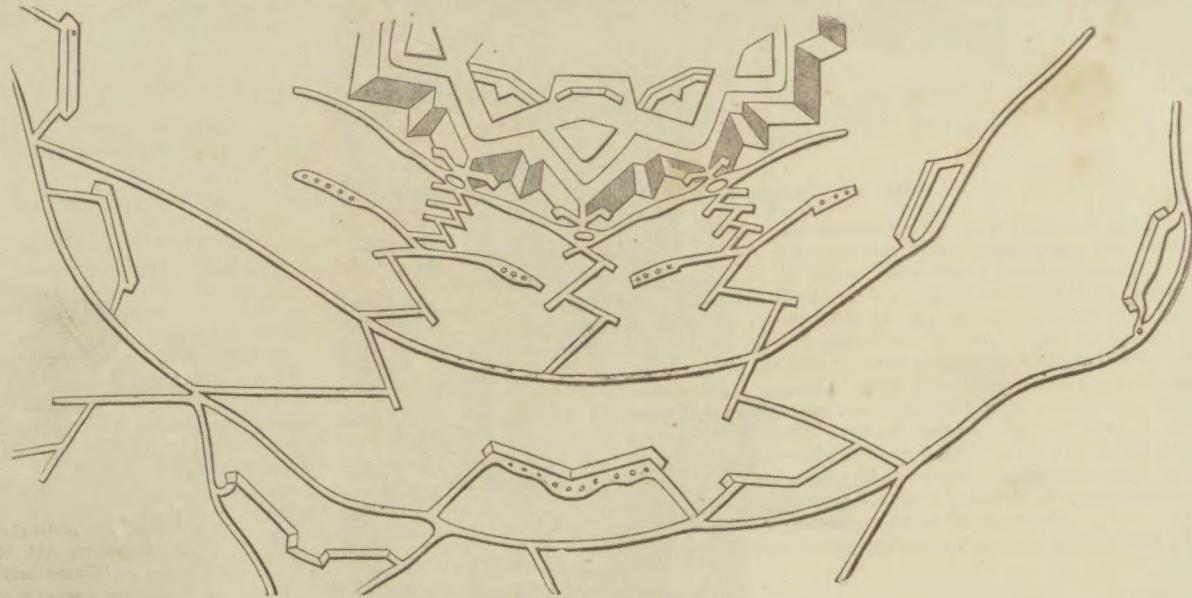


Fig. 7.—PLAN OF SIEGE OPERATIONS.

longation, right and left, of the zig-zags from these demi-parallels and of the prolonged central zig-zag from the second parallel. The third parallel, so completed, it will be seen, skirts the salient angle of the glacis in front of the ravelin, and two bastions, forming the front attacked; from these, the trenching to the crest of the *covered-way*, where the breaching cannon is to be placed, is performed in the form of abrupt indentations; or rather in full or single *sap*, with square ditches of earth intervening at the sides alternately.

The conclusion drawn by all practical men upon a general consideration of the bastion system is, that, wherever it is concerned, the attack is superior to the defence, and the capture of any place, however it may be protracted by the extent of exterior works, and the number and ingenuity of retrenched works, is still only a matter of time—time which in most cases may be calculated to a nicety before hand.

Amongst the objections to the system, however improved by interior retrenchments, or external works, are two which appear to be conclusive. 1. That an assailant can always invest the work, and concentrate upon every portion of it a stronger amount of material than that contained in the place itself, and direct such a fire from direct, enfilade, or vertical batteries (mortars), as sooner or later to overwhelm the defenders; and, 2. That when the place attacked is forced in one point, it must yield in all, in consequence of the connection between consecutive fronts of bastions and curtains.

Perhaps, what has more than anything else tended to the advantage of the besiegers is the introduction of the mortar battery, which, in disregarding the ordinary methods of approach against the works of the fortification itself, pours destructive missiles into the very *enceinte* of the place, utterly demolishing all buildings which are not bomb-proof. In cases where a town defended by a continuous line of fortification is so attacked, the destruction of life amongst the inhabitants, and the suffering occasioned, are terrible to contemplate, in consideration of which commanders have sometimes been induced, from motives of humanity, to desist from the use of this formidable weapon. An instance of the kind, highly honourable to the great General who commanded, occurred at Badajoz, thus described in the "Wellington Despatches":—

Badajoz, 24th March, 1811.—In all the sieges which I have carried on this country, I have used only the fire of guns, principally from entertaining an opinion that the fire of mortars and howitzers has an effect upon the inhabitants of a town alone; and that a French garrison, in a Spanish or Portuguese town, would be but little likely to attend to the wishes or feelings of its inhabitants. By this measure, I have diminished considerably the expense and difficulty of these operations; and, at all events, whether successful or not, I have done no injury to the Spanish or Portuguese inhabitants.

These considerations have led to a new arrangement in nearly all the constructions since the year 1815. The new fortifications at Paris combine a bastioned *enceinte continué*, with detached forts. In Germany are several remarkable examples of extensive fortifications, wholly consisting of chains of advanced and detached works—lunettes, forts, redoubts, towers, &c.—mutually flanking one another, at distances of from 300 to 2000 yards, either as the sole scheme of defence, or as additional defences beyond the old fortifications of the town or place. These forts, or works, of various forms, are generally casemated, with strong redoubts in the interior, and their ditches protected by vaulted caponnières thrown across them, with loopholes for musketry, besides loopholed galleries behind the counterscarps. Remarkable instances of such a mode of defence are to be seen in Fort Alexander and Ehrenbreitstein, at Coblenz; in the detached forts which surround Cologne; in the Hartenberg Redoubts, at Mayence; and at Lintz, on the Danube, which is defended by a chain of thirty-two circular redoubts, casemated, and having on their roof guns mounted on traversing platforms. Silistria, also, which has recently successfully resisted the siege operations of a large Russian force, is a remarkable instance of a fortified *enceinte*, still further strengthened by important detached works.

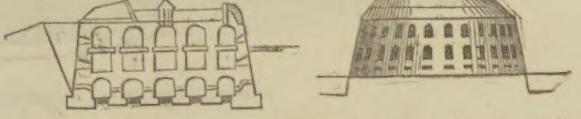


Fig. 8.—CIRCULAR REDOUTS AT LINTZ, SECTION AND ELEVATION.



REVIEW OF THE DIVISION UNDER PRINCE NAPOLEON BEFORE THE SULTAN, AT SCUTARI.—ZOUAVES DEFILING.—(SEE PRECEDING PAGE.)



H.R.M. FOOT GUARDS ENCAMPED AT SCUTARI.—FROM A DAGUERREOTYPE BY MR. ROBERTSON, OF CONSTANTINOPLE.

## THE ALLIED TROOPS IN TURKEY.

(From our Special Correspondent.)

CONSTANTINOPLE, 10th June, 1854.

THE only incident worth recording that has transpired since my last was the review of the French troops by the Sultan. After several adjournments, it was arranged that this ceremony should take place on Saturday last; and, so great was the excitement created by the news of this extraordinary event, that, for several days previous, not a vehicle or horse was to be had in Pera for "love or money." The place chosen for the review was the Daoub Pacha Barracks, situated at the distance of about a league and a half from Pera, on the south side of Stamboul, and about three miles from the gates. These barracks were the first barracks ever constructed in Turkey for regular troops; and are, as may be supposed, not in the best condition. The corridors are

paved, like the streets of Constantinople, and the troops have been compelled to abandon them for their tents. The French troops at Daoub Pacha are not half so well off as the English troops are at Scutari. The barracks of Scutari are in a splendid state. Indeed, we doubt if there are finer in the whole of Europe. Their proximity to a large town is another advantage which is not possessed by the barracks at Daoub Pacha; and while the English soldiers are driven about in drockies, set aside entirely for their use, the French soldiers have to walk several hours beneath a scorching sun before they come to a shop. The officers complain loudly of this inequality of position, but no bad feeling has been engendered between the Allied troops, as everybody is aware that it is solely owing to the mismanagement of the French Government; although it would be as well to avoid such contingencies in future, in order that the perfect harmony which exists between the united forces may not be disturbed.

The review was characterised by the same absence of Turks as on former occasions, and when the Sultan passed along the streets of Constantinople on his way to the barracks, no crowd collected in his rear to follow him thither. I was utterly astonished at the European aspect of the crowd. But for the arabs, and the four square towers of the ugly barracks just peeping above the horizon, one might have fancied himself on the commons at Ascot or Epsom. The whole European population of the surrounding districts, and especially those of Pera and Galata, had flocked thither in great bodies, some in vehicles, some on horses, some on donkeys. Representatives of almost every province and of almost every creed were there in motley groups, the most conspicuous being the Armenians, Greeks, and Jews. It was evident the whole country had made a holiday of it, and was determined to make the most they could of the opportunity.

The Sultan arrived on the spot at one o'clock, in the very best spirits



BRITISH INFANTRY OF THE LINE ENCAMPED AT SCUTARI.—FROM A DAGUERREOTYPE BY MR. ROBERTSON, OF CONSTANTINOPLE.

and health, as far as outward appearance went. He was accompanied to the grounds by the Marshal, who had gone forth to meet him; and was attended by his own staff, which, with the exception of two or three pachas, or officers, certainly had a most shabby appearance. He was mounted on a fine black charger, and wore a plain frock coat, white trousers, and fez; only he had this day an *agrafe* of diamonds, and a star on his long cloak.

The Sultan seemed thoroughly in earnest during the inspection. He examined everything with the greatest care and minuteness; and his eye seemed to dwell on every man he passed. He walked his horse close to the ranks, and often turned round to ask questions of the soldiers. The Sultan was evidently much delighted—if we are to judge from the relaxation of his accustomed solemnity of expression—a somewhat rare occurrence with Turks in general, and with Sultans in particular. After having passed along the French lines, he galloped, as a mere matter of form, along those of the Turkish troops, consisting of two regiments of foot, one of cavalry, and one of artillery.

When the Sultan had taken his stand beside his tent, the review commenced. Prince Napoleon marched forth at the head of his division, and, saluting the Sultan with his sword in passing, wheeled round to take his stand in front. It is well known that the Sultan never bows to any one, and he did not deviate from the general rule on this occasion, though it is rumoured that the Prince evinced great dissatisfaction at receiving no inclination of the head in return to his salute.

The Chasseurs de Vincennes next defiled *au pas gymnastique*, and with bugles playing. The magnificent divisions of the Zouaves next sallied forth, and conducted themselves in an admirable manner, which was thoroughly appreciated by the Sultan and his corps, notwithstanding that they wore the green turban, which, being the privileged colour of the Emirs, would, it was supposed, have given great offence. All those foolish ideas, however, about particular colours are fast disappearing in Turkey. Next came the splendid Regiment of Marines; the two Regiments of Infantry *Légère*; the artillery, consisting of two batteries; and a squadron of Spahis (Hussars), who executed a sort of Arabian fantasia; just realising what you may have seen in the pictures of Vernet, or in the admirable drawings of Raffet. The French cavalry was only represented there, with the preceding exception, by Light Cuirassiers—something in the Astley's style. The ground was kept by French gendarmes. The shakos had been taken away from the men two days previously, which was a pity, as they would have greatly added to the appearance of the troops during the review; although, of course, the comfort of the men is the first thing to be considered. The képi (or small cap) is now the only head-dress worn in the French army; and it is to be hoped the example will be followed by the English. Epaulettes for officers have also been done away with, the distinction of grades being shown by the number of small lace bands on the sleeves, above the cuffs, like the officers of the Spahis. In spite, however, of the extreme simplicity of their costumes, the troops presented a very fine appearance.

After the French troops had passed in review before the Sultan, the Turkish troops defiled. One regiment, I observed, had gaiters, an innovation of great interest, and until very recently, much objected to on account of its *irreligious* tendency; although it seems no easy matter to conceive what gaiters can have to do with religion.

After the review was over, Madame de St. Arnaud, who was in an open barouche, accompanied by Madame Yousouf, wife of the Franco-African General, rode up to the Sultan, on receiving a message by an Aide-de-camp, and was introduced to his Highness. This is said to be the first time that a Christian lady was ever introduced to the Sultan, and it was considered fortunate that no Turks were near at the moment. Madame de St. Arnaud stood up in her carriage; the Sultan did not bow, as it is against etiquette, but nodded in a most significant manner.

It has been, and is still, very often discussed here, whether or not the Sultan actually speaks any European language. I have so often been told that he does not, and that, too, by people who have lived in Constantinople for years, that I have always entertained that belief myself. A gentleman in the service, however, and one who, from his position, is as likely as any man to know the real state of the case, assures me that the Sultan Abdul-Medjid speaks the French language remarkably well. This is only on private occasions, however, such as when he talks to his music-master, Donizetti, for instance, or his gardener, an Alsatian, who is in high favour with the Sultan. The reason for his not speaking French in public is that, like the Pope, he enjoys the privilege of being considered infallible, and would, of course, compromise that privilege if he exposed himself to the danger of committing blunders. Besides, the Mahometans look upon Christians in the light of inferiors, and would consider it a great compromise to their dignity to talk with the "tongue of a Giaour." It is said that the present Sultan is above such prejudices; but the infringement of the revered customs of his country would damage his reputation among his people.

It is a great pity that no pains have been taken to make a more favourable impression on the population of Constantinople than has been made by the Allied troops quartered in that city. The population of Constantinople, strange as it may appear, have not the least idea of what the British and French troops really are. A *promenade militaire*, through the streets and principal parts of Stamboul, with drum and bugles sounding, would not have failed to produce a great sensation among the inhabitants, notwithstanding the alleged apathy and unimpressionability of the Eastern people. Hitherto, it is only the upper classes and the diplomatic circles who have had the benefit of the *séjour* of the army.

On Sunday morning the two regiments of Zouaves were embarked on board three French steam-frigates, lying opposite the arsenal, the *Roland*, the *Berthollet*, and *Vauban*, *en route* for Varna; and on Monday the Chasseurs de Vincennes (1100) and three companies of Marines.

By the end of this week the whole of the First Division will be in Varna; so that, including the 20,000 English already arrived, and the 10,000 French infantry which passed the Bosphorus last week, the army in and about Varna will amount to some 40,000 troops.

The division of cavalry, commanded by General D'Allonyville, and composed of about 1800 men (two regiments of Chasseurs d'Afrique and one of Dragoons), must have arrived at Adrianople by this time.

At Gallipoli there are very few left—a regiment of Cuirassiers, some infantry, and two squadrons of Hussars. These last are not yet mounted. It was a folly not to bring horses here—a most stupid economy; for scarcely any are to be had here. The French Cavalry Commission, which has been sitting at the Seraskier's for the last three months, has managed to obtain a hundred, out of which fifty-seven have been found serviceable!

The new organisation of the Bashi-bozoiks is not in a very advanced state. Ever since it was made known that they were to be placed under the command of English and French officers, these men have deserted by hundreds, and disappeared no one knows where. The fact is, they do not much like the notion of being disciplined, drilled, and shot, and do not seem to think our military system at all agreeable. But there is this to be said for them, they get no regular pay, and no booty from the Russians, as they were led to expect. They have till now enjoyed amongst the Bulgarians the faculty of doing much harm to these poor peasants, but no good to themselves.

General Yousouf, an Arabian, who has been raised to that rank in the French Armée d'Afrique, now resident at Varna, and Colonel Beaton, of the Indian Irregular Cavalry, resident at Schumla, are to

superintend the formation of these corps; but, hitherto, all candidates<sup>6</sup> (amounting to some thousands) have been applying for Colonels, Noboby is humble enough to accept the grade of Captain or Lieutenant.

Hotels in Pera are "crammed to suffocation" with mustachioed and spurred gents—in Albert Smith's acceptation of the word—who are ready for entering in campaign. After having remained a few days at Varna and Schumla, they return here, pretending to be disgusted with the delays; but, in reality, highly piqued on account of the coldness with which they have been received in their capacity of candidates or colonels or majorships.

No news from the seat of war. Silistria continues in a state of defence, although nobody expected that it would have held out more than six or seven weeks, at the most. Omer Pacha has succeeded in reinforcing the garrison with 2000 men, who easily entered the town. Not a single house is left standing. No trench has been opened yet. Omer Pacha remains in Schumla, not daring to move a step.

It has been reported that the Anglo-French army would not begin operations this year, Marshal St. Arnaud having intimated that he would not do anything unless he had 150,000 men.

The overflow of the Danube, with the equivocal position of part of the Russian army, has been the cause of many rumours as to an intended attack of the combined forces. Marshal St. Arnaud and Lord Raglan are still here. Works are erected by French and English engineers at Varna. Omer Pacha does not stir from Schumla, and the fleets have resumed their usual inactivity.

CONSTANTINOPLE, June 29.

Admiral Bruat's fleet—two line-of-battle ships, three steamers, and a number of transports—passed here yesterday, *en route* for Varna. Some grand coup is expected in the Black Sea—perhaps an attack on Sebastopol. There seems to be no likelihood of anything on land, by our troops, this season, since the raising of the siege of Silistria.

I visited, a few days ago, a very large hospital here, not yet all constructed, which is destined for the French troops. The officers there told me that it could not be made useful before three months; and added, "What does it signify? it will not be needed this year."

The review of the troops at Eculiari, is thus described by the Correspondent of the *Morning Chronicle*:

The first sight that met my eye as I cantered on towards the great barracks of Doud Pacha, which lay about half a mile to the right, was a detachment of about twenty African Spahis, who were plunging about the ploughed fields at a full gallop, for what purpose I could not make out, digging the sharp eight-inch scimitar which is fastened to their stirrups into the flank of their unfortunate steeds. They are a very picturesque, wild, savage-looking set of men, and ride admirably; but it was a disgustingly cruel exhibition. These Spahis are attached to the guard of Marshal St. Arnaud. The troops were drawn out along the plain, which extends from the barracks of Ramis Tchifflik to that of Doud Pacha. The whole division of Prince Napoleon was there, numbering 9500 men, and consisting of two battalions of the 20th Regiment Light Infantry, two battalions of the 22nd Regiment ditto, two battalions of Infanterie de Marine, two battalions of Zouaves, one battalion of Chasseurs de Vincennes, and two batteries of 12-pounders, each with six pieces. This, with the 30 Spahis, and about 20 Cuirassiers, formed the whole French force. Four battalions of Turkish Infantry, one squadron of cavalry, and one battery of six guns were also on the field. A large green tent had been constructed for the Sultan in the centre of the field. He arrived at a little after one o'clock, and was met by Prince Napoleon, Marshal St. Arnaud, and a numerous staff. Abdul Medjid was mounted on a jet-black Arabian, and rode down the ranks, closely followed by Prince Napoleon, Marshal St. Arnaud, and a numerous staff, amongst whom figured several British officers. The Sultan several times pushed his horse to a canter, and, after having inspected the troops, he advanced towards a phaeton, in which were seated Madame la Maréchale St. Arnaud and another lady, and addressed them in French. This act of the Padishah's greatly astonished his subjects the Turks. "The Sultan to speak to a fair woman! Very extraordinary!" M. de Benedetti, the Chargé d'Affaires of France, and all the personnel of the Embassy, attended in full uniform. The French troops looked well, smart and active. The Zouaves have an especially business-like look about them, and their dress is well adapted to the land and the climate. They are mostly large men, and they cut a very good figure alongside the French, going through their evolutions with equal ease and quickness. Their artillery is excellent in every respect; and that they will fight well they have proved ever since the commencement of this war. No manoeuvres were gone through. After the Sultan had ridden along the ranks, he was accompanied to the tent, where he took up his stand, together with Prince Napoleon, the French Marshal, and the whole staff. He did not, however, descend from horseback. The troops marched past with bands playing; and by half-past two o'clock they returned to their quarters. The ground was covered with carriages and horsemen, and there were many ladies on horseback. They were mostly from Pera and Galata. Scarcely any Turkish women were there, though there were plenty of Turks.

#### NOTES ON THE DISEASES OF TURKEY,

IN REFERENCE TO EUROPEAN TROOPS; AND MEMOIR ON THE REMITTENT FEVER OF THE LEVANT.

The first of these medical essays is by Dr. Schulhof, and the last by Dr. Charles Bryce; and both are of great national interest at the present time. The immediate importance of Dr. Schulhof's work cannot be overrated. Probably, as he remarks, the only English physician possessing personal knowledge of the country, which is now the theatre of war in the East, his experience has been invited by our Government, in a manner at once honourable to himself, to the seekers for his intelligence, and to science, and essential to the well-being of our brave compatriots on the banks of the Danube, and their gallant associates of France and Turkey. Dr. Bryce's memoir is also of present application and permanent value; but our attention is more peculiarly attracted to the paper which, under the unassuming title of "Notes," must be of infinite service to the medical staff and military officers, to whose guidance has been committed the comfort and safety (as far as circumstances admit) of so many thousands of the most precious sons of gallant old England. The trust is infinite; and towards its efficient discharge, the light shed over its needful duties by this pamphlet must largely contribute. The condition of the Russian hospitals has been, and is, even horrible; and wounds, disease, and death have committed havoc among the devoted troops, compared with which, the casualties and fatalities in the field of battle, dreadful as they have been, are as trifles in the balance. To be taught by skill and knowledge, how best to prepare against so miserable a state of things, and how to meet the inevitable evils that must arise, was a wise measure in the medical department of our Army and Ordnance, and the prompt response to the inquiry so seasonably instituted, equally valuable and salutary. No doubt the instruction and counsels here given are already in the hands of every professional man and official in the East, to whose charge the care and health of our army and navy has been committed.

It is not for us, however, to enter upon abstruse points expressed in technical phraseology; and the reader of a popular journal will not expect from it disquisitions on the Etiology, Prophylaxis, and treatment of the diseases which prevail in and near the Danubian provinces. Our glance must be more general; and the useful application of the principles laid down be left to those who are engaged in this momentous service.

The geographical position of the territories, now covered with hostile arms, is that of an irregular triangle, at the apex of which the Danube enters from the Austrian dominions, and flows to the Black Sea; having its right bank flanked by the high mountains of the Balkan (from Servia to their termination below Varna), and its left by the less elevated branches of the Carpathians tapering away into the hills of North Bessarabia. The Euxine, between Odessa and Bourgas, may be considered the base, sustaining the province of Bulgaria, as the right half; whilst Greater Wallachia, South Moldavia, and South Bessarabia (the left half of the triangle), into which region the war now converges, present an immense plain, unbroken by a single hill. The river

flowing through this flat clayey country vast tracts into swamp and marshes, exhaling a very pernicious atmosphere—the left shore being most exposed to the intensity of the poison; and the very ground where the Russian corps, defeated before Silistria, is at present reorganising with additional strength, towards the Delta, formed by the embouchures of the Danube, is subject to the most dangerous exhalations of the miasma, so fatal to human life, especially when exposed to such a climate, unsheltered by day or night.

But, leaving the brief spring behind us at the end of April, we come to the summer months, two of which have already passed, and three are yet to speed away in hostile operations—at the end of which, thick fogs and tremendous showers, with piercing cold winds, will necessitate another condition of things—we find the temperature most trying to the human constitution, and disease prevailing to a frightful extent. Dr. Schulhof enumerates a ghastly phalanx—a roll-call, that must rapidly thin the strongest musters:

*Rheumatism*, of the most serious character, prevails throughout Wallachia, and all Bulgaria nearest to the Danube. Strangers must dress warm, and keep their heads well covered, in order to avoid this painful malady. How are our soldiers' uniforms and caps suited to these requisites? We fear, not well; and yet, here, the laughed-at big grenadier bear-skin may be discovered to be no indifferent protection to the heads that wear it.

*Pleurisy*, and other disorders, are caused by exposure to rains, sleeping in the fields, marching in swamps, checks of the perspiration, and by all of which the human frame is prostrated. Dr. S. states that the Turkish physicians are apt to make an injudicious use of the lancet in these cases, and advises a different treatment.

*Ophthalmia* is rife, and warning is given to the men not to use each other's towels or brushes in barracks; and cod-liver oil is recommended to be applied to the eyelids, when glued together—a remedy which may be worth trying at home.

*Coup-de-Soleil* is frequent; and the scarcity of trees in South Bessarabia, Bulgaria, and Roumelia, increases the risk of the stroke.

*Boils* occur oftener on the right than on the left side of the "triangle" described; and individuals of delicate skin, like the English, are most liable to their disabling attack.

*Pneumonia* and *Bronchitis* are more perilous and destructive, and are induced by the damp and chilly evenings after the excessive heat of the day, to which our gallant countrymen must be exposed.

*Ague* is a Turkish disease *par excellence*, and lasts all the year round, and the liability of troops engaged in war to its severest attacks is comprehensive and imminent, for they are brought on by muscular fatigue, exposure to vicissitudes of heat and chill, fatiguing marches, excitement, sleepless nights, irregular meals, fasting, improper food, encampment in the open field, and a hundred ills which the poor soldier is doomed to encounter. Let us trust that quinine is abundant in our medical chests in the East, so that we need not be driven to the Turkish prescription of *Amulets*, nor even to Hahnemann's homoeopathic cure, by administering the billionth part of a grain of bark; on which our author observes, with a quiet humour, "considering all circumstances, I must give the prize to the Amulet."

*Fever*, and, alas! the minatory catalogue of the dread array, grows darker and darker; dangerous fevers absolutely reign in the Dobrudja and the Delta, and are very severe. They appear most generally as the swamps dry up; and the quicker the process goes on, the worse they are. The heat and rapid evaporation more than decimated the Russian army in 1829; but it is to be hoped that with our commissariat, and forewarned, the British force will not be found, as the Russians were, half-clad, half-starved, or living on the most miserable food, so as to fall before the rage of remittent fever—often mistaken for, and mistakenly treated as, typhus and plague. It is bad enough; but with ample provision of every kind, careful officers, and a well-informed and watchful medical staff, there is happily less to fear than may be imagined from the precedent of devastation twenty-five years ago. "If medical aid is called in early enough (we rejoice to add Dr. Schulhof's opinion) the progress of the disease may be stayed." It is, nevertheless, apt to degenerate, if neglected, into continued fever; an eruption of black spots, delirium, gangrene, and other fatal symptoms ensue, and the sufferer sinks rapidly into the grave. This is the Dobrudja putrid fever.

*Dysentery*, "the scourge of armies," is not far off, for the predisposing causes of that destructive disorder and of ague and fever, are the same; and indulgence in fruits or raw vegetables is almost certain to create this malady.

*Diarrhoea* is also predominating. The tone of the bowels is impaired by some of the foregoing diseases, to prevent which good and dry boots are a chief desideratum. Our Highlanders are advised to imitate the native mountaineers, and take to their leggings: they will never take to their legs before an enemy. Last we shall name (for plague is rare, and turpentine internally is recommended for it),

*Typhus* and *Typhoid Fever*, the sources of which abound in the Danubian Provinces to an extraordinary degree—the sky, the soil, and the folly of man contributing their quota towards their production. Strange to say, disaster and retreat will carry terror and death by this affliction into the ranks of a disheartened foe, whilst, on the contrary, a victorious army may defy its ravages, and find health restored "by the laurel's verdant leaves."

Feeling that it cannot be otherwise than most deeply interesting to every British heart, to know the perils to which our brave defenders are exposed, we have thought it expedient to run through this alarming list; but we have done so, not to increase, but to allay public anxiety, by showing that Government has sought the best information for its guidance—that such information has been liberally communicated—and that the means and appliances of the country must have been called into most active requisition to supply everything, especially including necessities which, experience, precaution, and science could suggest as necessary for the preservation of our noble bands in the pestiferous East. With such knowledge, and such resources, we may put our trust in Heaven that a large proportion of their dangers will be averted, and their sufferings, when they do occur, be alleviated.

On themselves much also depends. Simplicity in diet and avoidance of strong alcoholic liquors are of the highest importance; and Dr. Schulhof lays down many other rules for regimen, and particularly mentions as nutritious a species of pilchard caught near Varna "along that shore. The meat and vegetables in Wallachia tell us, are of first-rate description, and the wine excellent. In swamplish districts the water is generally bad; but in most towns villages there are good wells, sufficient for small supplies, though not for numerous armies. A small mixture of brandy is, however, recommended to foreigners, and we hope the French stores have not been forgotten in cognac. But these, and other matters touching supplies of every sort, though of vast consequence on the spot, need not be dwelt upon here. As for the Principalities, Russian intrigue and "occupation" have utterly impoverished them, and sapped every principle. The population live in gross ignorance and brutalising dependence; and the boyards and a few wealthy individuals are only educated into refined selfishness and ambiguity of character, to understand which, says our informant, is to know more than the Wallachians themselves. The rescue may be now: let us pray that the time has come, and a fine race be allowed to be restored to the dignity and happiness of human nature.

Of Dr. Bryce's memoir on the Levant fever, we are not called upon to speak. His publication on the etiology of fevers, in 1832, is familiar to the Faculty; and a reiteration of his views is not suited to our columns. We therefore take our leave of the world before us, with our thanks to Dr. Schulhof for the able and exemplary manner in which he has performed the patriotic duty to which he was invited by the highest medical authorities.

[We have just received a private letter from the Camp near Varna, in which our Correspondent (an artillery officer) states that only one case of cholera had occurred, but that dysentery was prevalent among our countrymen. Several soldiers had been drowned while bathing, in spite of caution not to go among the reefs; and, when liquor was readily procurable, the temptation was as not firmly resisted as the friends of the service might desire.]

## SWEDISH LITERATURE.

## RUNEBERG'S POEMS.

It has been said in Sweden—"Our loss of Finland is repaid, more than repaid, by the songs of Runeberg." Perhaps this expression may seem rather exaggerated, perhaps it may be considered a profanation to compare the loss of a land—the destiny of a people, with some little poems of a living poet. But we must not forget that events greater than Finland's succumbing to Russian arms and gold, have been preserved in the memory of mankind, solely by the glow of inspiration which they have kindled in a poet's soul. Or tell me, what were to us Troy and the battles under her walls, on Scamander's waves? What were to us Priam, Helena, Hector, and Achilles, had Homer not chosen them as the subjects of his songs? And are then not his songs more to us than all these heroes of antiquity, with their bloody combats and strange adventures? And, to cite another example—What is to the world Hamlet, and his tragical history; what are King John and King Richard, and the history of their times, compared to the dramas of Shakespeare.

Runeberg is not only the modern Homer of Finland, but of all the lands of the north. In a new epic form he has sung the fierce battles, the almost superhuman exertions and sufferings of Finland in the war of 1808-1809, against Russian violence and treachery; the many traits of individual courage, and noble emulation, between the sons of Finland and Sweden; their self-sacrifices, endurance, and contempt of death. And verily, should barbarism overwhelm Europe, uproot its civilisation and drive back our literature, the songs of our bards, into the depths of the forests, the songs of Runeberg would live on there in the people's mind, and a future time would gather them from the people's lips, even as we have gathered from ancient times the songs of Homer, of Ossian, and Calevala.

As we have spoken of Runeberg's poems, we would mention more particularly the "Tales of Ensign Stal." These detached pieces form, as it were, the epic cycle of the Finnish war, prefaced by a spirited lyrical invocation "to his Fatherland," and further introduced by a description of the poet's first acquaintance with the old soldier, Ensign Stahl, who told him, by the light of the evening fire, the deeds of the brave:

Thou lov'st, dear youth, the minstrel's lay,  
Thou lov'st our legends old;  
Perchance that thou wilt sing one day  
The tale that now I've told.

So speaks the old man to the young poet, who listens with filial reverence to his legends, and publishes them by the name of "Ensign Stal's Tales."

We have desired to introduce them to the English public, as they have been in like manner, within the last two or three years, introduced to the German public, which has received them most favourably. We have thought that these songs, notwithstanding their peculiarly national character, would find sympathy in English hearts, through their purity and deep feeling, their noble spirit, and the great simplicity of their style, whereby they present a strong contrast to the more florid kind of poetry which has long prevailed in the north, and on this account their appearance may, without exaggeration, be said to form a new epoch in northern poetry.

But the English reader will, we hope, better enter into the genius of these songs, through the songs themselves, than through any description of ours.

## SVEABORG.

(Translated from the Swedish of J. L. Runeberg.)

During the war in Finland, in 1807, General Cronstedt betrayed the impregnable fortress of Sveaborg into the hands of the Russians, under General Suchet, though it had a garrison of 6000 men, and sufficient provisions and ammunition to enable it to maintain itself for a whole year. He was induced to commit this frightful act of treachery by Russian bribes, as well as forged newspapers, introduced into the fortress, containing false accounts of the losses sustained by the Swedes. By this, as well as other acts of treachery, Finland fell into the hands of Russia, notwithstanding the bold and valiant exploits of the Swedish Generals Adlercreutz, Dobeln, Sandels, Kleugapoor, &c., who did their utmost to defend the unhappy country against Russian invasion. The same Cronstedt, who now acted such a despicable part, had previously distinguished himself by gaining the battle of Svensksund, one of the most decisive naval engagements, when 190 Swedish vessels beat 230 Russian, destroying 50 of the enemy's ships with a loss of only two themselves; the Prince of Nassau, who commanded the Russian fleet, being mortally wounded, while attempting to escape by swimming. This great victory was gained on the 9th July, 1790. Sveaborg was strongly fortified by Count Ehrensvärd, in 1749, and was always considered impregnable; the fortifications extend over seven islands, situated at the entrance to the harbour of Helsingfors, the capital of Finland.

When evening shades began to fit,  
And bright the firelight shone,  
Old Ensign Stal and I would sit  
And talk of times bygone;  
Mid jests and jokes the hours ad-  
vanced,  
When Sveaborg to name we chanced.  
I spoke but carelessly the while,  
When straight the old man  
frowned:  
"Hast seen the wave-encircled isle,  
By Ehrnsvärd's bastions crowned?  
That proud Gibraltar of the north?"  
Thus moodily his words broke forth.

"It glances far o'er sea and sky,  
With eyes of granite stone;  
And bears Gustavus' sword on high  
And proudly calls—Come on!  
That sword deals not in idle threats,  
It flashes—and annihilates.

"Near not that isle with boastful  
men  
On battle's blood-red path!  
Rouse not the haughty Ocean Queen  
In her dread hour of wrath.  
She'll send thee back some fierce  
death-notes,  
Through thousand cannons' gaping  
throats.

"Borne back was Finland's armed  
might,  
Even to the Polar snows;  
Yet still our hopes were fishing  
bright.  
And high our spirit rose;

Well might we brave all hostile  
powers;  
Sveaborg as Sveaborg was ours.  
"What lightnings flashed in every  
glance  
Whene'er that name was said;  
All fears and murmurs died at once,  
Even cold and hunger fled.  
The Finnish bear from slumbers  
woke—

It raised its paw, and dealt the stroke.  
"How oft, as in cold nights he lay  
Upon his icy bed,  
Far, far from earth and home away,  
That word the soldier said.

It was his tent when snowdrifts fall,  
In distant lands his home—his all.  
"Twas then a whisper floated by;  
Dark rumour we could trace,  
That spoke of shame and treachery,  
And of our arms' disgrace.

From rank to rank the news was  
borne,  
But only met with haughty scorn.  
"But who, till time be dead, shall e'er  
Forget the shame, the groan,  
When, like a thunderbolt of fear,  
The fatal truth was known,  
That all our last, fond hopes were  
o'er.

That Sveaborg was ours no more.

## SVEN DUFVA.

A sergeant was Sven Dufva's sire, worn, old, and grey-haired now, He served his king in eighty-eight, nor then was young I trow; A little farm supplied his wants, as poorly as it might. Nine children flocked around his board, the youngest Sven was hight. Now, if within the old man's brain enough of wit did dwell To share among so many heads, is more than I can tell; Yet, sure it is the elder ones, more than their due had ta'en, For to the son who last was born, there scarce remained a grain.

Meanwhile Sven Dufva grew apace, waxed broad of limb and strong; He cleared the woods, and in the fields he toiled the whole day long; Was kinder, gayer, gentler too, than many a wiser wight,

And did whatever he was bid—but never did it right.

"In Heaven's name, my poor, poor boy, what will become of thee?" Thus spake the old man many a time, and pondered anxiously;

Until his son grew tired to hear this song so oft renewed,

And he began to think himself, as wisely as he could.

When, therefore, Sergeant Dufva now one day began again,

To sing the burden of his song, "What canst thou be, oh Sven?"

The old man scarce believed his ears, so thunderstruck was he,

When Sven, his broad mouth open and said, "A soldier I will be!"

The aged sergeant gazed awhile with scorn upon the youth;

"Dart boy, wilt thou a soldier be, and carry arms, forsooth?"

"Yes," said the lad, here all goes wrong, so awkward is my hand,

Perhaps I will easier be to die for King and Fatherland."

Sven Dufva stood amazed and moved, a tear gleamed in his eye;

Sven slung his knapsack on his back, and sought the camp hard by.

His form had reached the standard height, was broad and stout to boot,

So in Duncker's company at once was made recruit.

Young Dufva was now to be drilled, and learn to exercise—

It was the drollest sight to see that ever met your eyes.

The corporal hallooed and laughed, laughed and hallooed again,

But his recruit remained unchanged, in pleasure and in pain.

He practised with unflinching zeal, more patience none could show,

He stamped till earth beneath him quaked, and the drops stood on his

brow;

But when the word was given to turn, he blundered worse and worse—

When ordered right or left about, he did just the reverse.

His gun to shoulder he was taught, and lower it in turn,

And by degrees his bayonet to handle he could learn;

But when commanded to present, he lowered his arms full oft,

And when to lower them he was bid, he brandished them aloft.

Thus fame reported far and wide how Sven went through his drill,

And all, both officers and men, smiled at his want of skill;

But he went plodding on, unmindful who might float,

And always hoped for better times—and then the war broke out.

Now when the troops prepared to march, some question rose again

If Dufva had got wit enough to join in the campaign,

He let them stand, stood calmly by, and said in coolest tone:

"If I may not with others go, then I must go alone."

His gun and knapsack he slung on, as any other might,

Was serving man in hours of rest, a soldier in the fight;

And if he served, or if he fought, he still was calm and cool,

And none had called him coward yet, though some might call him fool.

Brave Sandels to retreat was fain, borne back by Russian force,

And step by step his host he led along a river's course—

Now somewhat in advance of them a bridge the current crossed,

A little outpost there was placed, scarce twenty men at most.

These men had lately been dispatched, the highway to repair,

And lay in peace, their labours o'er, far from the din of war;

While in a farmstead near at hand, their wants they all supplied,

And let Sven Dufva wait on them, for he was there beside.

But suddenly the scene was changed, for down at headlong speed,

Came gallant Sandels' Adjutant, all on his foaming steed:

"Off to the bridge, my lads," he cried, "for God's sake, charge the foe!

'Tis said the enemy prepares to cross the stream below."

"And, Sir," unto their leader thus his hasty orders ran:

"Break down the bridge, if possible, or fight to the last man!

The army is lost, if here the foe should burst upon our rear;

You shall have help, the General himself will soon be here!"

Away he galloped. But the troop scarce reached the bridge below,

When high upon the bank beyond was seen th' approaching foe.

They spread, they thickened, they took aim, and fired a volley round,

And, at the first salute, eight Fins lay dead upon the ground.

It was too much, they staggered back—to tarry, now, were vain;

Another volley, and but five of their brave band remain.

So all obeyed the signal given, in order to retreat,

Sven Dufva only he mistook, and lowered his bayonet.

And when the others faced about, he blundered more and more,

For, far from turning back at once, down on the bridge he bore;

And thus he stood, erect and broad, as steady as a rock,

Prepared to show that, henceforth, none his skill in arms might mock.

Nor was it long ere he could prove he had not learnt in vain,

For in a moment, o'er the bridge, the foe poured forth like rain;

They thundered onward, one by one, and as their numbers swelled,

He struck them right and left about, until like flies they fell.

To cut this giant down in vain they strove with headlong ire,

The foremost foe still sheltered him against the others' fire;

Yet fiercer far they grew to find their hopes so dearly bought,

When Sandels with his band drew nigh, and saw how Dufva fought.

"Ha, bravo, bravo!" he exclaimed, "keep on, my champion bold:

Let not one devil cross that bridge—thy place a moment hold!

'Tis thus a Fin should fight—such men we well may soldiers call:

Fly to his rescue—charge, my lads! This one has saved us all!"

Soon as the fierce invaders found that all assault was vain,

The Russian squadrons slowly turned, and swept back o'er the plain.

When all was o'er, the General alighted from his horse,

And asked for him who on that bridge had bravely the hostile force.

They pointed out Sven Dufva, then. His battle now was o'er;

Bravely and boldly he had fought, but he would fight no more.

It seemed as he had laid him down to rest from toil and war;

Perhaps not calmer than before, but only paler far.

And Sandels bent him down, and gazed on him that slept in peace—

It was no stranger that he saw, full well he knew that face.

But 'neath his heart even as he lay, the grass was stained and red,

A treacherous ball had pierced his breast, and he was cold and dead.

"That ball knew well where it should hit, this saying is most true."

Thus gravely spoke the General, "far more than we knew."

It left his brain untouched, for that was but his weakest part,

And struck at what was better far, his noble, gallant heart."

And through the army, far and wide, these words like wildfire flew,

And all with one accord agreed that Sandels' words were true.

Poor Dufva's wit was scant, they said, to serve in woe or weal;

His head was weak, but all confess, his heart was true as steel.

As they pointed out Sven Dufva, then. His battle now was o'er;

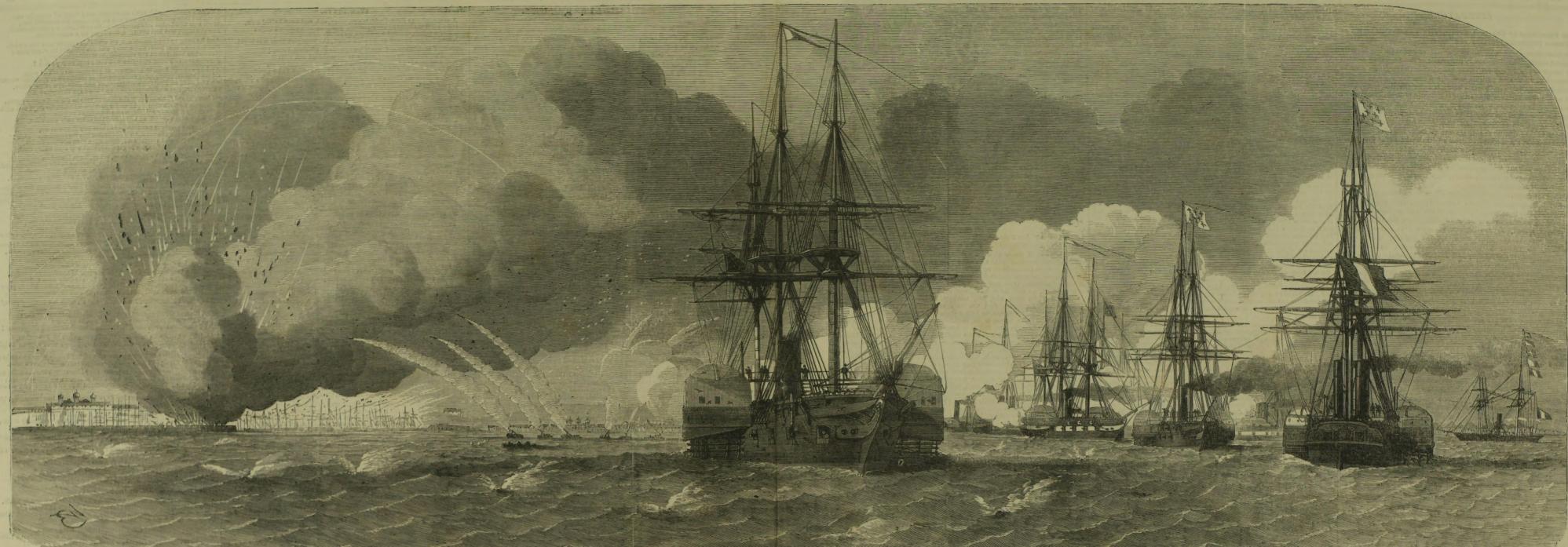
Bravely and boldly he had fought, but he would fight no more.

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Perhaps not calmer than before, but only paler far.

As they pointed out Sven Dufva, then. His battle now was o'er;

Bravely and boldly he had fought, but he would fight



IMPERIAL MOLE AND BATTERY.  
(EXPLODED, 1 P.M.)

TRANSPORTS AND SHIPPING  
ON FIRE.

ROCKET-BOATS  
SALT MAGAZINE ON FIRE.

"THE TERRIBLE"

"SAMSON"

"RETRIBUTION."

"VAUBAN,"

"MOGADOR"

"CATON" PRESENTING SIGNALS.

THE BOMBARDMENT OF ODESSA BY THE ENGLISH AND FRENCH STEAM SQUADRON.—SKETCHED BY LIEUTENANT MONTAGU O'REILLY, H.M.S. "RETRIBUTION."

We are now enabled to present to our readers a view of this memorable attack, by the allied fleets, upon the principal mercantile city in this part of Russia, which we have sketched from life. For a full representation we are indebted to the pencil of Lieutenant Montagu O'Reilly, H.M.S. *Retribution*. The details of the bombardment were published in the official despatches. We quote the principal incidents—

At 2.30 a.m. Saturday, April 22nd, 1854, the steam squadron weighed; consisting of—

*Samson* FIRST DIVISION.  
*Tiger* English | *Descartes* French;  
*Vauban* :: :: French;

*Retribution* English } SECOND DIVISION.  
*Furious* English }  
*Terrible* English }  
*Descartes* English ;  
The following was the attacking force: French, *Mogador*, *Vimont*, *Descartes*, *Caton*; English, *Samson*, *Terrible*, *Tiger*, *Retribution*, *Furious*; and a detachment of rocket-boats under Commander Dixon. The *Samson* and *Higbyer* acted as a reserve.

At five o'clock on the morning of the 22nd of April, the signal was made for the steamer to commence an attack on the Imperial Mole, and the fortifications in its neighbourhood. The steamers entered in two

divisions. The first consisted of the *Samson*, *Furious*, *Vauban*, and *Retribution*. The second division consisted of the *Tiger*, *Retribution*, and three French steamers. The *Retribution* led the way, closely followed by the other steamers. The Russians had laid down a "barrier," that is, an old vessel was anchored to mark the distance of her enormous guns, then whirled round in a circle of about half a mile in diameter, each taking up the fire in succession. The guns in the mole answered steadily, and in the course of an hour the *Vimont* came towards the fleet, on fire from red-hot shot, and riddled in several places. Happily the fire was got under, and she returned to her port.

At seven a.m. the second division received the signal to stand in. It con-

sisted of the *Terrible*, *Tiger*, *Retribution*, and three French steamers. The *Retribution* led the way, closely followed by the other steamers. The Russians had laid down a "barrier," that is, an old vessel was anchored to mark the distance of her enormous guns, then whirled round in a circle of about half a mile in diameter, each taking up the fire in succession. The guns in the mole answered steadily, and in the course of an hour the *Vimont* came towards the fleet, on fire from red-hot shot, and riddled in several places. Happily the fire was got under, and she returned to her port.

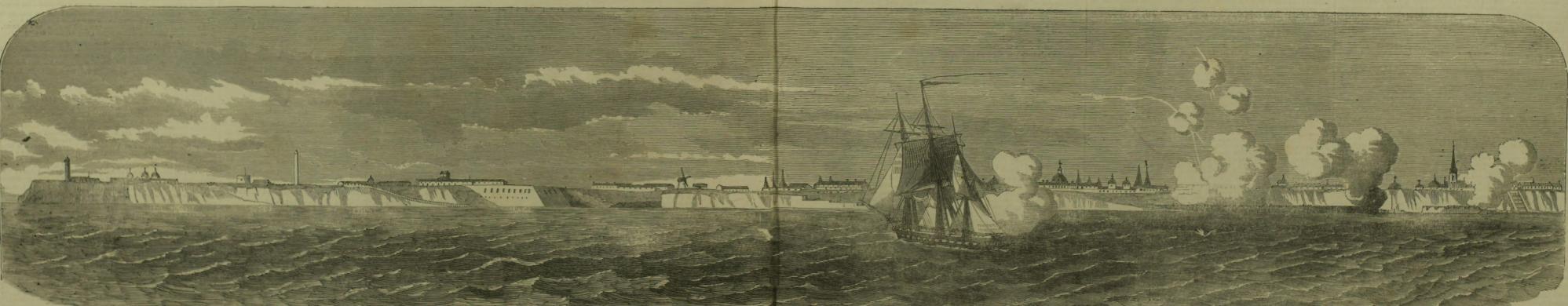
tinued to fire red-hot shot. A Russian frigate in the harbour took fire, burnt to the water's edge, and blew up.

Each of the vessels which remained out of action had sent a rocket boat, firing 24 rockets, and these caused terrible destruction. The dockyard was set alight, and the magazine exploded. It was seen in flames, no new frigates, and from 100 to 300 merchantmen were on the stocks or on the stocks.

At half-past five p.m., when the action had lasted twelve hours and a half, the signal of recall was made. The action ceased; the *Terrible* having lost two men killed and five wounded; the *Vimont* two men killed and one wounded; the *Retribution* three, and the *Samson* five wounded. The *Terrible*

was received with all honours on passing the fleet. Each ship cheered her as she steamed past on her way to the *Hopkins*.

This attack on Odessa was skilfully and bravely conducted. The rocket-boats were adroitly managed under a galling fire from every way well prepared, but nothing could impress the cool determination of the united steam squadrons to conquer the cruel hooligan which the unfortunate *Vimont* found fast with the rocks. It is to be regretted that a bombardment, so successfully commenced, was not carried to a more effective result. We believe Mr. Montagu O'Reilly, Senior Lieutenant of the *Retribution*, was the only commissioned officer wounded.



LIGHTHOUSE, CAFE FONTAIN. CONVENT.

LAZARETTO.

LAZARETTO.

"CATHUSA" HOVE TO.

ROMAN CATHOLIC CHURCH.

QUARANTINE MOLE AND BATTERY.

CATHEDRAL.

ODESSA AND THE ADJACENT COAST.—SKETCHED BY LIEUTENANT MONTAGU O'REILLY, H.M.S. "RETRIBUTION."

## LITERATURE.

## THE PRINCIPLES OF CRIMINAL LEGISLATION AND THE PRACTICE OF PRISON DISCIPLINE INVESTIGATED. By GEORGE COMBE. Simpkin.

The momentous question of the fit disposal of criminals has recently acquired augmented importance by the refusal of the Australian colonies any longer to receive the convicts of the Mother Country. So long as transportation remained possible, and our population could be purified by the comparatively easy process of draining off the dregs, the question of the reformation of the criminal attracted in England but small share of public attention. Our own interests did not appear to be directly concerned, and the voice of humanity, through ignorance or indifference, remained unheeded. But now, when it has become a matter of certainty that English society must in future be leavened by the admixture of a large proportion of those criminals who, under the former régime, would have been sent into banishment, it becomes a question not only of most serious import but also of pressing urgency, to decide upon the course that best promises to prepare the criminal for the proper enjoyment of recovered liberty, and to guard society against contamination and future outrage.

But are the means now in use inadequate for the attainment of these ends? Mr. Combe proves them to have utterly failed, and the facts which he adduces in support of this conclusion, are, we have no hesitation in saying, thoroughly convincing. Judging from the operations of the present system, we are driven to infer that crime is generally regarded in the light of a specific malady, which must accordingly be treated by certain specific remedies, such as solitary confinement, the treadmill, and crankwheel, while the mental and bodily constitution of the prisoner, and the nature of the circumstances in which he was previously placed, are left entirely out of the question. The wonder is, not that such treatment should have failed of success, but that it should ever have found believers in its efficacy. It seems to have been forgotten that a criminal, though in a state of debasement, is still a member of the human family, and subject to the laws of our common nature; for, on what other ground can we for a moment excuse the infliction of solitary confinement till the nervous system is prostrated by disease, or the imposition of labour so exhausting that suicide is had recourse to for relief? These melancholy mistakes are the natural results of ignoring the relation that subsists between mind and organisation, and of assuming that the former can be modified independently of the condition of the latter. As a general rule, the governors of our prisons are men who have received no special education or training for their important office. They are usually retired officers of the army, and consider their functions to be limited to the maintenance of strict discipline among the prisoners. But even were it otherwise, and were they men capable, from mental qualities and appropriate training, of seeing and deplored the evils of the system committed to them for administration, they have no power to apply a remedy. Their field of action is limited by the Legislature, which has enacted that, according to certain prescribed rules, the reformation of criminals must be carried out; no matter what may have been their previous history, what their education, or what may be their present mental and physical condition.

Mr. Combe aims at a thorough reform. He starts from the fundamental principle, that no successful treatment of criminals is possible, until the aid of physiology is invoked, and every man is considered on his own individual grounds. Different criminals have different constitutions: one is weak, and sensitive; another strong, and callous; and thus, different causes, operating on different individuals, produce similar crimes; while, in other cases, similar causes produce dissimilar crimes. Hence the absurdity of seeking to reform several hundred different natures by the indiscriminate application of one uniform system. Instead of this general routine, Mr. Combe proposes to send every individual convicted of crime to a reformatory prison, where his treatment would be conducted on the following principles:—

Persons competently skilled should examine him, and draw up a record of his age and stature, and of the proportions which his abdominal, respiratory, and circulatory organs, and his brain, bear to each other; of the size of his brain, measured round the base, from the top of the nose to the spinous process of the occipital bone, and thence to the nose again; from the top of the nose, directly over the forehead and coronal region, to the above-named process; and from ear to ear, on the line of the eyebrows; and, again, separately from ear to ear, on the line of the spinous process. These measurements, stated in inches and tenths, would indicate pretty well whether the brain was small, large, or of a medium size, and show whether we were dealing with a feeble, average, or powerful-minded person—an indispensable element of knowledge in judging of his treatment. Every convict is an individual, and individuals differ from each other in physical and mental qualities, through the whole range from the Aztec idiots to Socrates or Napoleon Bonaparte. It would be as rational to treat all patients, whatever their ages, sexes, constitutions, and diseases might be, in one and the same way, with a view to their cure, as to treat all convicts alike with a view to their reformation.

Having recorded these particular items of the constitution, the next thing should be to state the size of the different regions of the brain, viz., the anterior lobe, coronal region, and basilar region, and their relative proportions, according to the best estimate that could be formed; for it is impossible as to ascertain these dimensions with mathematical precision. This would go far to show the absolute and relative power of the intellectual, moral, and animal faculties with which we had to deal. Next, the predominating, the medium, and the deficient organs should be estimated and stated. This would show, for example, whether the individual was naturally violent and open; cruel, yet reserved and deceitful; inclined to theft; the jovial, reckless, and daring victim to sensual pleasure, but not malevolent, and so forth; also, whether he was naturally insensible to justice, to religious emotion, to benevolent feeling, or the reverse; also whether his intellectual powers were feeble or strong, and whether these were deficient in the observing department, in the reflecting department, or in both.

These particulars of the constitution would prepare the way for estimating the temperament which, should next be observed and recorded; whether it is nervous, sanguine, fibrous, or lymphatic, or a combination of these. This also is an important article of knowledge for our guidance in the treatment, since it indicates largely the activity and power of resistance of the organism generally, and particularly of the brain.

This record of the bodily system being completed, the next inquiry should be into the history of the individual. Who were his parents? Were they sane or insane? drunken or sober? What kind of employment were they engaged in? What training and instruction did they give the convict? What trade was he taught? What does he now know, and what can he do?

Answers to these questions, considered in connection with the record of his corporeal constitution, would present a tolerably precise view of the real nature and condition of the being upon whom we intended to operate. They would reveal the causes of his crime—whether it arose from a feeble mind and body, inherited from diseased or drunken parents; from strong natural vicious dispositions; or from neither of these, but from sheer misdirection, ignorance, and unfavourable circumstances. Convicts, who had become such from these different causes, would require very different modes of treatment. When once possessed of this information, we should be able to classify prisoners more successfully than has hitherto been done, and to apply a mode of treatment to each class suited to the natural qualities and circumstances of the individuals who compose it.

To those who are in the habit of considering phrenology as destitute of any foundation in nature, these ideas will appear simply ridiculous; but they may be inclined to pause before they decidedly reject them as absurd, if they will first consider the following opinion, prefixed to the pamphlet, which is signed by Sir Benjamin Brodie, Sir James Clark, Sir Henry Holland, Professor Owen, Sir John Forbes, Dr. Conolly, and Professor Carpenter—men whose "names are great in mouths of wisest censure":—

Having been requested to state our opinion of the annexed pamphlet, we, without being understood to become answerable for the accuracy of all the facts, or the soundness of all the reasonings which it contains, have no hesitation in giving our opinion the fundamental principle which pervades it—namely, that *Criminal Legislation and Prison Discipline will never attain to a scientific, consistent, practical, and efficient character, until they become based on physiology, and especially on the physiology of the brain and nervous system*—is a sound principle; and most strongly entertaining

this conviction, we recommend Mr. Combe's views to the consideration of all who take an interest in these momentous subjects.

The limits to which we are here confined do not permit us to enter into any further details; and we therefore content ourselves by referring to the pamphlet itself, all who take delight in works which bear the impress of deep thought and genuine benevolence.

TRANSCAUCASIA: Sketches of the Nations and Races between the Black Sea and the Caspian. By Baron Von HANTHAUSEN. Chapman and Hall.

The learned author of this volume is advantageously known by his "Studies on Russia," in which he investigates the internal and economical state of that empire, and the work before us will add to his literary fame. Starting from Kertch, on the Black Sea, our traveller landed at Redout Kalé, and proceeded to Mingrelia, where he speaks almost in rapture of the forests, particularly of the beech-trees, "surpassing in beauty those of Holland and Zealand." Arrived at Kutais, the chief town of Mingrelia, he there describes the system of landed tenure. "The cultivators are not a class of independent landed proprietors, but hold either under the Crown, the monasteries, or the nobles. The latter class have, probably, been regarded as serfs only since the Russian occupation of the country; the two first classes are still free." So it appears that serfdom is one of the means by which Russia proposes to civilise its dependencies. Mzkheta, the ancient residence of the Czars of Georgia, is next reached. According to tradition, it was built by Mzkhitos, great-grandson of Noah. It is supposed to be one of the most ancient towns in the world; and Dr. Lyall, in his "Travels," states that it was once twenty miles in circumference, and contained eighty thousand men capable of bearing arms. Our traveller next arrived at Tiflis, the modern capital of Georgia, and there met some German colonists, all, as he was informed, Suabians, principally from Wurtemberg, "who emigrated about the year 1818, deeming their religious opinions and rights injuriously invaded in their own country." They were first established at Odessa, and afterwards transplanted to the neighbourhood of Tiflis. They seem to be fanatics, for nothing but military force prevented them from abandoning their new home and all their possessions to emigrate to Jerusalem, believing that the end of the world was approaching. Hitherto they appear to have exercised little influence in elevating the conditions of the surrounding Georgians and Latins. Some interesting remarks are made on Georgian agriculture. The farms have no strict allotments:

If, for instance, a man dies leaving a son in his minority, the nearest neighbour takes the seigniorial land, with the taxes to which it is liable (in some instances at the instigation of the proprietor himself), and the heir, on coming of age, takes his share from the waste land. . . . Taxation is usually the tenth of the produce, but only in a few places is it paid in kind: that portion which falls on the corn districts is commuted for a fixed payment, but, I believe, unequally. In some places I found that the Crown peasants, on each day's work, pay one kod of wheat or barley, whichever is on the ground. In a bad year the taxes are remitted; and this, of course, opens the door to the arbitrary intervention of officials. In other places I was told that the Crown demands two kod from every family, levied according to the census: for this the parish is responsible; and the allotment rests with the Natyaz.

In a second edition, the translator would do well, in a foot note, to explain the English weight and measure of "one kod."

The reader will find some highly-interesting particulars of the Jews from pages 136 to 141. It appears that the Talmudist Jews are met with in all the countries south of the Caucasus. The Karaim Jews live principally in the provinces of Erivan and Akhalzik. They assert their descent, pure and unmixed, from the tribe of Judah, which was led to Babylon:—

In the district of Derbend there is said to be a sect of Jews named Uriani, who embraced Christianity, but without relinquishing their observance of the Jewish law in its full extent. They keep holy only the Sabbath-day, and adhere strictly to all the injunctions and usages of the Law, following the example of Christ, whom they acknowledge as the Messiah, and who likewise enjoined obedience to the Law. It is said that they claim to be a remnant of the tribe of Benjamin, who during, or after, the captivity, moved northwards from Assyria. At the period of the birth of Christ, they assert, their scribes announced that the Messiah was born in Bethlehem; and, in consequence, they sent thither two of their number, named Longinus and Elias, who were received among the seventy disciples of Christ. After the Crucifixion and Resurrection, the latter returned to their brethren, taking with them the under-garment of Christ (not the seamless coat), which is still preserved and worn in the Cathedral of Mzcheta, near Tiflis. Longinus is said to have committed to writing the teachings of the Savour, in a book which they assert is still in existence—or, at least, a transcript of it, but is preserved with great secrecy. They have no knowledge of the New Testament. I could be of the highest interest to institute a research respecting this sect, although very difficult to arrive at the truth; but how important the discovery of a book which might in any degree form a corollary to the Gospel. The fate of the Israelite tribes in Assyria, it is known, still remains a matter of historical doubt: they were, unquestionably, dispersed throughout Asia, and a large portion penetrated to the Caucasian countries, although they are not found there in any considerable numbers at the present day. In the fifth century the King of Persia transplanted 71,000 Jewish families from the towns of Armenia into Persia.

Armenia is celebrated for legends about Noah and the Ark, which rested on Mount Ararat. When Noah looked out of the Ark from Ararat, he beheld dry ground, and on that spot Erivan is said to be built; for, in the language of Armenia, Erivan means "Visible." Here he planted the vine which is still shown, but, owing to the sins of mankind, it does bear grapes yielding wine. The town of Nakhichevan signifies the first spot on which Noah alighted. "There is a marked distinction between the Armenians and Georgians; whilst the constitution of the latter people is strictly feudal in its character, the political state of Armenia is essentially democratic. . . . The family constitution and domestic life of the Armenians are quite of patriarchal character; but in one respect they differ fundamentally from the Asiatic nations; the social position which woman occupies, the recognition of her independence, and her claims to an equality of respect and dignity. Among the Mohamedan people woman is regarded only in the light of a semi-human creature: she is the born slave of man." This is the popular opinion; but there are passages in the Koran, quoted in Mr. Hobhouse's (new Lord Broughton) travels, which decide the matter in a totally opposite sense. Thus Mohamed expressly states, that "Whosoever doeth good works, either man or woman, and believeth, shall enter into Paradise." In another passage, he says, "Believing men and women shall enter into the heavenly Paradise." This, the highest possible testimony, effectively refutes the vulgar error.

The Yezidis dwell in Armenia. They believe in the same God as the Armenians, regard Jesus as the Son of God, and venerate Mary; nevertheless, they are "devil-worshippers." The following is what Haxthausen learned about this curious sect:—

The Yezidis are Monotheists, and are ignorant of the doctrine of the Trinity. Of the Holy Spirit they know nothing. They designate Christ as the Son of God, but do not recognise his divinity. They believe that Satan (Sheitan) was the first created, greatest, and most exalted of the archangels; that the world was made by him at God's command, and that to him was entrusted its government; but that, for esteeming himself equal to God, he was banished from the Divine presence. Nevertheless, he will be again received into favour, and his kingdom (this world) restored to him. They suffer no one to think ill of Satan; if the Tatar Mohamedan curse, "Accursed be Satan," they are bound either to slay the speaker or themselves. On a certain day they offer to Satan thirty sheep; at Easter they sacrifice to Christ, but only one sheep. Christ, they say, is merciful, but Satan is not so readily propitiated. The sacrifices take place, usually, in the open country, but sometimes near the Armenian churches; they are offered chiefly to Satan, sometimes to Christ and the Saints; rarely, or never, directly to the Supreme Being."

When the period of Satan's exile from the dominion of the world he created is over, the Yezidis expect that he will reward them, who alone have never spoken ill of him, and have suffered so much for him. On which our author exclaims—"Martyrdom for the rights of Satan! Strange confusion of ideas, with something nevertheless touching."

The devil-worshippers, however, are not confined to Armenia. They exist in Siam, and regard Satan as a vizier in disgrace, who may some day be restored to power; and they worship him from prudence, lest he should punish them when reinstated in his grandeur.

The celebrated Convent of Echmiadzin, the residence of the Patriarch of the Armenian Church, was visited by our traveller. It is about seventeen versts from Erivan, or about twelve English miles. "The Armenians say that this was the site of Paradise; and that the fire-vomiting Ararat was the flaming sword of the Angel who guarded the entrance against Adam and his posterity. The Flood destroyed the Garden of Eden, and quenched the fire, but likewise obliged Noah to land upon the mountain; so that the human race was distributed a second time from this spot. Here Noah saw the rainbow of reconciliation; and here he found the vine, the last remnant of the delicious fruits of Para-

dise. This famous convent is not remarkable for its size—its length being only fifty yards, its breadth forty-eight, and its height thirty-five. The Byzantine, Gothic, Moorish, and Italian styles being all blended in the structure, is evidence of its having been built at different periods. It is richly endowed, possessing five villages, containing 3459 inhabitants, and some scattered estates in Georgia. "The relic of the Holy Lance, preserved at Echmiadzin, is believed by the Mohamedans of Bazard, to be the only remedy for the plague, which is said to return every seven years. It is carried thither in solemn procession, and is asserted to have invariably arrested the disease." In this chapter will be found much valuable information as to the relation in which the Patriarch stands to the Russian Government, and also to the Pope of Rome. The eleventh chapter is filled with Armenian legends, of a highly poetical character, which will amuse the lovers of romance and of ingenious fiction.

Among the Ossetians, Baron Haxthausen discovered a strong resemblance to the manners and customs of the ancient Germans. The hearth in their houses, and the manner of suspending a kettle from an iron hook fastened to a cross beam, precisely resembling those "in the peasants' cottages of Westphalia and Lower Saxony. The stalls for the milch cows are on each side of the dwelling-room, that they may be under the eye of the mistress, who, as in Westphalia, can overlook them from the fire-place. The Ossetes, like the Germans, brew beer from barley, and give it the same name. They use drinking-horns like the Georgians, and, to my astonishment, wooden beer-cans, and on particular occasions wooden beakers, exactly like those used from time immemorial in Germany." The whole of this chapter is full of research on the migration of races. The volume, as a whole, is most instructive, and is most opportunely published now, that war has called public attention to the Caucasus, and the Transcaucasian provinces of Russia.

EVENINGS AT ANTIOCH; with Sketches of Syrian Life. By F. A. NEALE, Esq., author of "Eight Years in Syria." Eyre and Williams. Antioch is one of those places which have a voice; it is one of those eloquent and warning spots to which Sulpicius would have pointed, to rebuke the fleshly sadness or the unreasonable repining of a Cicero, or of any less illustrious murmurers. It has been one of the most notable cities of the East; it is one of the oldest; over few have such vicissitudes passed; to few have happened such catastrophes; it has had memorable visits from war, fire, tempest, and earthquake—from the vengeance of Emperors, and the rage and greed of barbarians; its wealth has been enormous, its importance and fame were once worldwide. But all this interest is in remembrance only; the day of the prosperity of Antioch the noble is gone "to join the past eternity." Paul and Barnabas would not, in its present state, select it as affording the same mighty concourse of souls to be gained to the new law through their Apostolate.

The world, however, is such, that thousands relish with peculiar keenness an account of the present aspect of sites of evanished greatness, and delight in reading the modern adventures and experiences of some person like themselves, among monumental and historical scenes, which it is not their own lot to visit, but among which the very contrast between the things that now occur and the things which the place calls to mind, is a distinct and real, though by the reader often unnoticed, source of entertainment.

Such is Mr. Neale's subject in his "Evenings at Antioch," and the subsidiary lights which he throws on existing manners in Syria. He was connected with the Consular service; besides that, he used to practise the healing art in that country. It may be inferred that he enjoyed good opportunities of learning the character of the inhabitants, and their customs; and some very clear and pleasant information on those points is given in his introduction, where he also relates a few striking anecdotes, one of which is truly horrible, though, for all that ever was known of Ibrahim Pacha, there is no rational ground for pronouncing it incredible; it is truly horrible, and, we fear, horribly true also. We have been very much interested with this introduction.

The work itself, which is short, consists of a graphic delineation of seven evenings, as they would probably be passed, and as the author has passed them, and as he may have passed such, hundreds of times, in modern Antiochian society. It is a good idea, by means of which Mr. Neale, in a light and agreeable, though sometimes flippant method, makes us familiar with every variety of that motley community, and shows us how life proceeds in a town which is amongst the most ruinous, the most memorable, the cheapest, and the most desolate in the world.

LETTERS FROM THE NILE. By J. W. CLAYTON, 13th Light Dragoons. Thomas Bosworth.

We took up this production of our Light Dragoon, without the slightest intention of reading much of it, but just to turn the pages over with a listless, cursory glance, skipping and dipping, so as to lose no more time than could be helped. But the work held us tenaciously. Perhaps this is one of the greatest commendations that it is possible to bestow on a light and unpretending book of travel. It is not every man who can write travels interestingly. A mere itinerary may be useful as a guide, but it cannot be pleasant reading. In general the most stupid method in a sermon, is that in which the preacher tells his auditory beforehand all the parts and divisions; and the most stupid and interest-killing form into which a traveller can throw his reminiscences is that of a diary. To keep a diary as a future track-line for what he has to tell, is a wise plan in an author; but to preserve the manner and ledger-like rules of it in his book, is the worst of blunders. Mr. Clayton belongs to quite a different school of writers. The reader never knows what he is next to read, any more than the narrator, at the date of the occurrences, knew what he himself was next going to do, to be, or to suffer. This is the right plan, and the true secret of sustaining attention, and of awakening an ever fresh interest. There is the effect of adventure in the perusal.

Add that the style—which we cannot, by the way, praise as always quite grammatical—is, nevertheless, full of sap and vivacity, offhand, racy, joyous, with a fair sprinkling of satirical humour, and you will acknowledge that this short series of letters must constitute a very recreative and cheering work to peruse. Indeed, from London-bridge to Egypt, you never once feel tired of your lively companion. He is clever, observant, hilarious, entirely free from the pervading modern defect of affectation, and quite instructed enough to hold his own against all chance comers. He is a master of joking, and many a smile he moves, as he travels with you through the enormous variety of scenes which separates the Thames from the Nile. This is a fair description of the little book, whose intrinsic merits drew us onward in its perusal, against our intent, till we knew not how to lay it down unfinished. In three relays of this epistolary conveyance, we get from Tower-street to Avignon, where a retrospective reflection breaks from the mouth of our military conductor. "A few days ago," cries he, "we were shivering in great coats in the chill October of England, when here we find a light sailor's jacket oppressive."

Now, having said a good deal in praise of the little book, and to all forego adding that we believe that whoever travels as far as Marseilles with our friend, will cross the seas under his escort, and will finish the tour in company so cheering—we must take leave to express our dissent from some of his views. We have not time to give examples, nor is the case worth such coil; and we hope the author will believe that this is not unlucky.

As to the style, which is gemmed with a thousand felicitous and even noble expressions, we have already noticed the occasional revolt against grammar. A little care, which would remedy that evil, would also cure another—we mean the rhetorical fault which is called that of "mixed metaphors." For instance—"He must be less than human who can gaze without emotion upon that column of moonlight slumbering on the silver bosom of this haleyon sea," &c. Columns (or pillars) neither wake nor sleep—functions peculiar to animal life. At the same time, the "column of moonlight" is a happy and good expression, as any gazer from the decks of far-wandering ships will avouch; more the pity that our gallant chronicler should think of putting this luminous column to bed. We hope he will write again.

MANUFACTURES OF GOLD WARE.—In consequence of the impediments experienced in many of the manufactures of gold ware in the United Kingdom from the existing law, which prohibits a lower standard than eighteen carats, a bill has been introduced by the Government granting power to the Crown to authorise, by an Order in Council, the adoption of a lower quality. The same bill also provides that gold and silver wares may be assayed at any lawful assay-office, wherever manufactured.

THE SPIRIT-RAPPERS.—The leading people in the spirit-rapping movement in the United States have been holding a convention at New York, and have formed themselves into a Society for the Diffusion of Spiritual Knowledge. Governor Tallmadge (Wisconsin) is president of the association.

# ENGLAND AND FRANCE.

POETRY BY CHARLES MACKAY.

*Moderato maestoso.*

MUSIC BY MRS. JOSEPH KIRKMAN.

Musical score for piano, showing two staves of music. The first staff is treble clef, 3/4 time, key signature of one flat. The second staff is bass clef, 3/4 time, key signature of one flat. The music includes dynamic markings: *crescendo*, *diminuendo*, and *p*.

Who dare dis - turb the lands, Arm - ing their fe - lon bands, Lift - ing their blood - red hands?

Musical score for piano, showing two staves of music. The first staff is treble clef, 3/4 time, key signature of one flat. The second staff is bass clef, 3/4 time, key signature of one flat.

Let them ad - vance! Two migh - ty States combined, Both of one heart and mind,

Musical score for piano, showing two staves of music. The first staff is treble clef, 3/4 time, key signature of one flat. The second staff is bass clef, 3/4 time, key signature of one flat.

Com - bat for hu - man kind, Eng - land and France!

Musical score for piano, showing two staves of music. The first staff is treble clef, 3/4 time, key signature of one flat. The second staff is bass clef, 3/4 time, key signature of one flat. The music includes dynamic markings: *cres.*, *dim.*, and *p*.

I.  
Who dare disturb the lands,  
Arming their felon bands,  
Lifting their blood-red hands?  
Let them advance!  
Two mighty States combined,  
Both of one heart and mind,  
Combat for human kind,  
England and France!

II.  
Friends of the rightful cause,  
Guardians of Europe's laws,  
Guilt in its schemes shall pause,  
Awed by their glance!  
Where their twin banners wave,  
Freedom shall bless the slave;  
Glory attend the brave  
England and France!

III.  
Foes of our peace and right,  
Tempt not the useless fight,—  
Vain is your arm of might,—  
Vain sword and lance!  
True hearts repeat the cry,  
England and Liberty!  
England and Victory!  
England and France!



ODESSA.—THE THEATRE.

## ODESSA.

The accompanying Views present striking specimens of the public buildings of the city of Odessa, the bombardment of which is illustrated in the present Number. It has already been described as the most flourishing port of the Black Sea, and these handsome edifices will bespeak its opulence. The princely mansion of Count Woronoff, which was destroyed during the late bombardment, was situated on the cliff at the end of the Boulevard, and is shown in the View engraved in the ILLUSTRATED LONDON NEWS for May 18; and in our Journal for May 6 will be found three other Views. The New Exchange, the colonnade of which we now engrave, is situated at the extremity of the Boulevard, opposite to Count Woronoff's Palace. The interior is handsome; and balls are held in the principal rooms during the winter season.

The Theatre, which we also illustrate, is in the large square, near the Hôtel de Richelieu. Italian Operas and French Plays



MEDAL IN COMMEMORATION OF THE UNION OF FRANCE AND ENGLAND.

are performed here throughout the year: here is likewise a Russian Theatre.

## ANGLO-FRENCH COMMEMORATIVE MEDAL.

MR. HART, the celebrated Medallist of Brussels, has just struck this very fine Medal, commemorative of the alliance of England and France on the Eastern question. In the centre of the principal side is an excellent portrait of the Sultan, surrounded with the words "Abdul-Medjid Khan, Empereur des Ottomans." On a very richly-designed border, surrounding the central figure, are a series of small shields supported by swords and banners, emblematic of England, France, and Turkey; in addition to scrolls bearing respectively the names of "Red-schild," "St. Arnaud," "Raglan," "Redcliffe," "Napoleon," "Riza Omer," "Cambridge," "Baraguay," "Dundas," and "Hamelin." On the obverse, "History" holds a laurel wreath, and is recording upon a pyramid the words "Victoire Napoleon, 1854—La Mer



ODESSA.—COLONNADE OF THE NEW EXCHANGE.



PERSIAN SOLDIERS IN THE PAY OF RUSSIA.—FROM AN ORIGINAL SKETCH.

Noire et le Danube seront libres." Around the medal are the words, "La France et l'Angleterre unies pour la Défense du Droit;" and at the foot of the seated figure, the words "Dieu le Veut." The design is, throughout, well conceived, and has been admirably executed by the medalist.

#### PERSIAN SOLDIERS IN THE RUSSIAN SERVICE.

This regiment, commanded by General Prince Béboudoff, is the most picturesque in attire of any in the Russian service, and the *tout ensemble* presented by the appearance of the soldiers, when mounted on their Arabian steeds, has quite a gorgeous effect. The material of their clothing is fine cloth for the surcoat; the underdress, tight fitting, is of silk, as also the lining of the long loose open sleeves, and full Turkish trousers. Although the costume is the same in all, the colours are

varied in each individual, exhibiting a variety of rich contrasts, and profusely decorated with gold and silver lace. Their peaked caps are of the short soft black wool of the Caucasian lambs. These Persian soldiers are slim and well made, with long oval faces, handsome features, and olive complexions; and their bearing and manner are frank and chivaleresque.

One of these, in the accompanying Sketch, by name "Dodasho Beo," whom the Prince politely sent to the Artist's residence, when at Warsaw, as a study for the pencil, on being offered a present of money for his trouble, declined it with an air of dignity; but craved, as a great boon, a portrait of himself to forward to his lady-love, somewhere in the interior of Persia—a request that was, of course, complied with.

This regiment was lately reported to have distinguished itself in the Caucasus.

Our Engraving recalls some interesting facts. Among the many methods employed by Russia in her pursuit of unlimited dominion, two

are remarkable. They are practised chiefly towards her less civilised and less powerful neighbours. One is to keep a body of Russian troops by friendly agreement in the territories of some other State, serving that State, and receiving its pay, for a given period. The other is to raise a force (and this also, if possible, in an amicable and preconcerted manner) among the inhabitants of a foreign but conterminous region, to draught that force into Russia, to maintain it with Russian money, and to incorporate it, more or less permanently, in the Russian army. Both these expedients have, respectively, important effects. The first teaches the Russian soldier everything that a future invader might find it necessary to learn of the resources, manners, temper, and geographical condition of the people amid whom he is thus temporarily domesticated. He notes the weak points and the strong, and can hereafter clearly show to his own Government what should be avoided—what may be seized—what precautions are requisite—what opportunities exist—how



EXTERIOR OF THE FORT OF CHAGAN-HALESI, ON THE ASIATIC SIDE OF THE DARDANELLES.—SKETCHED BY LIEUTENANT M. O'REILLY.—(SEE NEXT PAGE.)

the whole work of occupation should be managed. He is making a long reconnaissance, and on a great scale. More than this, he is becoming acclimated.

In the other case, where Russia levies a foreign body, draughts them into her own territory, and pays them—equal effects are produced. They are not, like those Russian troops of whom we have just spoken, and whom the Czar lends to a neighbour now and then—they are not, like these troops, disciplined soldiers, still under the orders of their own officers (and these officers carefully selected), holding constant communication with their country changed and replaced at will. No; they are foreign troops, commanded by Russian officers; they are troops who are taught and drilled by Russia, who are under the control of Russia, and who see only just what she pleases. When Russia withdraws her auxiliary contingents, she withdraws spies; but, when she disbands the other class of troops, and sends them back to their own land, she sends back emissaries, agents, and proselytes who prepare the way in their simple homesteads for the coming of the double-headed eagles under which they have served, and for the coming, moreover, of some old comrade in high command, who, perchance, having displayed superior abilities, has been promoted, and induced to naturalise himself in Russia, and to accept the allegiance of a State which loads him with crafty and insidious distinctions. Doubtless, the disbanded and re-armed troops could teach their countrymen something of the defences of Russia, in the same manner as the Russian contingent can give the converse information. But the terms are not equal. There is no question of ever invading Russia among those lesser communities; but in Russia their invasion, or absorption, is a business quite within practical realisation, and duly predetermined. This double system has been long pursued by the huge despotism of the East, all round its lower frontiers, from the shores of the Caspian and of Azof, down to those of the Black Sea, among all the tribes of the Caucasus who could be brought into that dangerous intercourse, and among the dependencies of Persia.

We present our readers with view of some of the soldiers of the latter country, serving under the colours of the Czar, and wearing the picturesque equipment of their own nation. From the earliest days, the Persian were capable of making good soldiers; decidedly they have been among the best of the Asiatics. They want only that which they have but seldom enjoyed, good organisation; and probably, in a climate and country suited to their constitutions, they would, if well led and well trained, be able to face successfully troops intrinsically superior, but new to the scene. However, recent events have done much to change the opinion that used to prevail, respecting Russian officership, and the value altogether of the Russian military system. The Russians must become good soldiers themselves, before they can make good soldiers of others. Certainly, if the Persians, in their hands, be not more redoubtable than their teachers, little is done.

There is, as our readers will perceive, some slight general similarity between the dress and air of the soldiers, represented in our Engraving, and those of their neighbours, the once cognate tribes of the Caucasus—always excepting the peculiarity of chain mail worn by these tribes. It is very remarkable that those of the Circassians, who have been, so to speak, proselytised by Russia—whose country has been occupied—and who have themselves been enrolled in the Russian service, and disciplined in the Russian way—while allowed to retain much of their native tactics—it is remarkable that these Circassians, in their encounters with their countrymen, where there is not some overwhelming disparity of numbers, are invariably defeated. The wild hawks are too much for the tame. On all sides, in fact, it seems as if the Russian system were a failure. Where they try to impart new vigour they communicate a weakness unknown before. Doubtless, the vastness of the population obedient to the Czar would prevail in the end over the resistance of a little tribe, or the efforts of effete Asiatic monarchies. But since the folly and obstinacy of the Government of Russia have brought the nations of the West to take part in these transactions the phantom which excited terror by its huge proportions is found to be without solidity or strength.

The Persians, of whom we give a Sketch, are armed with percussion muskets; so far have the modern improvements in warlike implements penetrated already.

#### THE DARDANELLES.

ALTHOUGH the Castles of the Dardanelles, which give name to the Strait, have been frequently sketched by visitors, they have, perhaps never been represented with greater spirit than is shown in the accompanying View, sketched by Lieut. O'Kelly, of H.M.S. *Retribution*, upon recent occasion. We have here the interior of the fort of Chanak-Kalesi, on the Asiatic side of the Dardanelles. There are altogether in the fort 102 guns. The diameter of the shot is thirty-six inches; length of carriage and gun, thirty feet; length of gun, fifteen feet: the several guns were cast at Bagdad. The gun in the foreground is that which struck the *Windsor Castle*, 76, in passing up the Dardanelles with Sir John Duckworth.

We add a few details of the fort:—"The castles, Chanak-Kalesi, or Sultanah-Kalesi, on the Asiatic side, and Khilid-Bahri, or Kelidbahar (the lock of the sea), on the European shore, are called by the Turks Boghaz-his-sarleri, and by the Franks the Old Castles of Anatolia and Roumelia. The town of Chanak-Kalesi is the place properly called the Dardanelles. It is a miserable town of 2000 houses, on a flat point, opposite to the European fort. Khilid-Bahri is built on the side of a projecting hill, and its castle is of less importance than that of Chanak-Kalesi. The barrow of Hecuba, or Cynossema, where the Athenians erected a trophy after their victory towards the end of the Peloponnesian War (Thucydides, viii.), is close to the European castle. The chief inhabitants of the town on the Asiatic side are Jews, who trade in the wine produced in the neighbouring vineyards. A considerable stream, supposed to be the Rhodius, washes the western suburbs; it is crossed, not far from the castle, by a wooden bridge. These castles were long supposed to occupy the sites of Sestos and Abydos; but this was manifestly a mistake. N.E. of Chanak-Kalesi, the Hellespont forms a long bay, three or four miles across, terminating in a low point of land called Nagara Burnu, or Pesquies Point. This is the spot fixed upon as the site of Abydos. A fort has been raised near the point of land."

#### PROGRESS OF RUSSIAN ENCROACHMENT.

The *Journal de la Statistique Universelle* publishes the following table of the successive encroachments of Russia from the fourteenth century up to the year 1832. It is drawn up from communications by MM. Schmitzler, Maltebrun, General Bem, and other statisticians:—

#### GRAND DUCHY OF MOSCOW.

	Extent in Geographical Miles.	Population.
In 1328, at the accession of Yvan (Kaleta)	4,656	6,290,000
In 1462, at the accession of Yvan I.	18,474	
In 1503, at the death of Yvan I.	37,137	
In 1584, at the death of Yvan II.	125,465	
In 1615, at the death of Michel I.	254,281	
In 1689, at the accession of Peter I.	263,900	16,000,000

EMPIRE OF RUSSIA.	Extent in Geographical Miles.	Population.
In 1725, at the accession of Catherine I.	273,815	20,000,000
In 1762, at the accession of Catherine II.	319,538	25,000,000
In 1796, at the death of Catherine II.	331,850	33,000,000
In 1825, at the death of Alexander I.	367,494	56,000,000
In 1831, at the taking of Warsaw	269,781	60,000,000

That is to say, that during the last two centuries Russia has doubled her territory; and during the last hundred years has tripled her population; her conquests during sixty years are equal to all she possessed in Europe before that period; her conquests from Sweden are greater than what remains of that kingdom; she has taken from the Tartars an extent equal to that of Turkey in Europe, with Greece, Italy, and Spain; her conquests from Turkey in Europe are more in extent than the kingdom of Prussia without the Rhenish provinces; she has taken from Turkey in Asia an extent of territory equal to all the small states of Germany; from Persia, equal to the whole of England (United Kingdom); and from Poland equal to the whole Austrian empire. A division of the population gives—

2,000,000 for the tribes of the Caucasus.  
4,000,000 for the Cosacks, the Georgians and the Khirguiz.  
5,000,000 for the Turks, the Mongols, and the Tartars.  
6,000,000 for the Ouralians, the Finlanders, and the Swedes.  
20,000,000 for the Muscovites (of the Greek Church).  
23,000,000 for the Poles (Roman and Greek Church united).

60,000,000

The population of ancient Poland counts for two-fifths of the total population over an eighth part of the territory, and the Muscovite population for one-third of the total number over a tenth of the territory; in other words, even at the present time, the Polish element is in a great majority as compared to all the others.

#### ARMY SCHOOL REGULATIONS.

(From a Military Correspondent.)

The present Secretary at War has effected more towards benefiting the interior economy of the Army than was attempted during an equal tenure of office by any of his immediate predecessors. The exertions of the right honourable gentleman have latterly been directed to the improvement of the condition of certain grades which have hitherto been permitted to pass wholly disregarded. The warrant of the 1st of June in the present year bears testimony to a laudable desire of advancing education, and consequently disseminating knowledge throughout the less exalted branches in the profession. Many provisions laid down in the new regulations are unexceptionably good, and the laudable intent of placing regimental schoolmasters on a more respectable footing than heretofore was accorded them, cannot fail to ensure increased attention from those whom they may be directed to instruct. Considerable trouble and expense have been devoted to this end, and much advantage may confidently be expected to result from the salutary change. Until within a brief period the responsibilities of the teacher were restricted to the primary sources of tuition, compatible with the undeveloped intellects of the children committed to his care. His erudition was not expected to extend beyond reading, writing, and the few first lessons in arithmetic. He was held answerable for the progress made by the boys; while, as a matter of course, his wife took charge of the girls. The nomination to these offices rested solely with the commanding officer; and when so little was requisite to make a man competent for the situation, general good conduct and an even temper were considered leading qualifications for the post. Now, however, a marked alteration has been resolved on; and the first-class schoolmaster is a warrant-officer; and ranks next to the commissioned officer; the second and third take precedence after the sergeant-major, and the assistant ranks with the sergeants. Promotion is vested in the Secretary at War upon the recommendation of the Inspector-General of Schools. They are to wear a military uniform, with certain distinctions denoting their grades. To all this no reasonable objection can be raised. The more a man is taught to respect himself, the more probable is it that he will ensure due consideration from others. Nevertheless, there are points in the warrant on which it would have been advisable to have taken a military opinion prior to its promulgation. The inconsistency in amount of pay and quarters, when compared with those given to a Captain, is glaring in the extreme. If the schoolmaster rigidly perform his duties, he receives no more than he justly deserves; but, at the same time, it should be borne in mind that he is better remunerated and more comfortably lodged than the officer who has paid some thousands of pounds for the honour of holding her Majesty's commission. Seven shillings per diem is the rate of salary now adjudged to the first-class instructor. Government supplies his dress, and as he messes in his own quarters, he can subsist as economically as he pleases, without being called upon to contribute subscriptions for any purpose whatever. The Income-tax does not reach him; two rooms are appropriated for his private use, and he is exonerated from all outlay consequent on being forced to enter into society. The warrant likewise specifies "furniture" for his apartments; but if the term is purposed to signify a diminutive table, two wooden chairs, a coal-box and unserviceable shovel, his dwelling, when handed over for his use, will not assume a less comfortable appearance than is enjoyed by his seniors in rank. The regimental pay of a captain is eleven shillings and sevenpence a day. With that sum he must find his uniform, disburse the annual subscriptions to mess and band funds, and pay a servant. Since the 1st of April last he is subjected to a double Income-tax; and he must dine at the mess, or pay for the meal if absent. Inspection dinners, entertainments, and a variety of unavoidable expenses, considerably curtail his professional income; and the officer is not only expected to maintain the appearance of a gentleman, but is compulsorily called upon to uphold the position which his commission exacts. It has been shown the schoolmaster has two rooms. The captain has but one. The schoolroom is likewise at the disposal of the teacher after and before the hours of study; and, should he have occasion to transact any business unconnected with his scholastic calling, he can make use of it without introducing visitors to his private abode. Not so the commissioned officer. At all hours, and frequently early in the morning, probably before he is dressed, his bed unmade, and his dormitory unprepared for the reception of any one, he is obliged to investigate complaints, examine the slate, give audience to his pay-sergeant, and decide questions affecting the men under his command. No one willingly selects his bed-chamber for a reception-room wherein to adjudicate between conflicting parties before his apparel is adjusted, and the locality metamorphosed into the semblance of a sitting-room. Such an *exposé* is not calculated to uphold the dignity and consequence of the officer in the estimation of his soldiers; neither can it prove agreeable to the feelings of a gentleman to behold a number of men marched into his sleeping apartment before it is possible to have it put in order. Yet these annoyances are of frequent occurrence; but constant repetition in no degree abates the discomfort. If it is absolutely essential that two rooms should be reserved for the schoolmaster's accommodation, irrespective of the one periodically used by the pupils, how much more imperative is the case with the officer, who sleeps and transacts his company's accounts in one small den? Throughout the United Kingdom, none under the rank of a field-officer can claim, as his right, more than one diminutive enclosure, which is often, during the twenty-four hours, successively converted into breakfast, sitting, and sleeping room. Cavalry barracks are generally more circumscribed in point of accommodation than those built for the infantry. Hounslow, Brighton, Dorchester, Dundalk, and in fact the whole dissimilate but little as regards size. It is not from a desire to diminish the comforts of the teacher, that these lines are penned, but rather in advocacy for increased convenience in behalf of those of higher rank; so as to place the latter, at least, on an equality with the warrant-officer. In the questions of pay and quarters, their relative positions are too widely disproportionate to escape remark. The standing now occupied by a schoolmaster, in barracks, is highly eligible; but it is undoubtedly objectionable, for many reasons, that his situation should be rendered, in any particular, more desirable than is considered amply sufficient for his superiors.

REAR-ADmirAL CORRY recently intercepted a boat off Baro Sound, the crew of which gave information that thirteen English prisoners (belonging to the *Vulture*), with a boat's gun and a musket, had arrived at Helsingfors, and that about as many more prisoners were at some other place in Finland.

USES OF THE IRISH CONSTABULARY.—Owing to the large draughts which this country has supplied to the British contingent in the East, Ireland and its capital especially, has ceased to be the great resource of the Queen's land service. As garrison duties, however, are still indispensable, and as piles of noble barracks have, moreover, to be kept from falling into dilapidation, the authorities have come to the conclusion that the time has arrived for the employment, as a substitute for the military, of that admirably equipped and disciplined body of men, the Irish county constabulary. A large reserve of this force is stationed at the *dépôts* barracks in the Phoenix Park, and orders were issued at the close of the last week to have the men held in readiness to take their turn at the various guard mountings in Dublin, as well as to discharge other duties which heretofore fell upon the regular troops of the line.

THE Russian prisoners of war at Constantinople, 204 in number at present, are to be supplied with rations, tenders for which on the following scale, have been advertised, and to commence from the 1st of July:—For each man, daily, one pound of bread (second bazaar quality), two-thirds of a pound of meat (beef and mutton alternately), one-third of a pound of vegetables, one ounce of sugar, one third of an ounce of tea, one sixteenth of an ounce of salt, and two pounds of fire-wood.

#### CRONSTADT.

We have already described and illustrated this stronghold of Russia, with its celebrated fortifications; but, the accompanying Engraving (upon page 56) is a coup d'œil of the extent and vastness of the fortifications, of which some idea may be formed by the statement that the front of the Picture shows "the only available passage for vessels of large size, ships entering which for hostile purposes would be exposed to a discharge of 32 lb. and 68 lb. shot from seven hundred guns simultaneously." The present Illustration has been copied (by permission of the publishers \*) from a large and cleverly-executed lithograph, from a drawing by Mr. E. T. Dolby, who is now on board one of the vessels of the Baltic fleet. The following account of a recent visit, from a work just published †, will be read with interest, especially in connexion with the accompanying View:—

I embarked (says the author) at the English quay, by a small steamer that passes between the port and the city, at an early hour in the day; and, by the aid of the current which runs perpetually down, we arrived at our destination in less than two hours, and landed at a long pier which jets out at the north-east corner of the town.

Bending our steps towards the water-side, after passing the custom-house, the arsenal, and a college of cadets, we reached the merchants' harbour, which is one of three connected basins that form the port; the other two of which are called the middle harbour and the man-of-war harbour. Here we engaged a boat, in which we rowed through the shipping to the quay and bastions, which front the sea. Upon mounting this bulwark of the town and the port, we came upon a broad rampart constructed of wood, upon a base of solid granite, forming as necessary a defence against the assault of the restless waves, as the guns with which it is mounted form against any attack from an enemy's fleet.

There is nothing connected with the island of Cronstadt that is not before the eye of the observer from one part or other of these ramparts. The island itself occupies nearly a middle position between the southern and northern shores of the bay of the Neva; or is about six miles from the shores of Cavilia on the northern side, and four from those of Ingra on the southern. It is about seven miles in length, but does not average more than a mile in breadth. It lies nearly parallel to the coast on either side; and the town, with its fortresses and basins, is situated in its south-eastern extremity. It was originally no more than a loose bed of sand and morass, strewed with masses of granite rock, such as are found in most low countries where there is much floating ice, which has doubtless, at some period or other, been the means by which they have been transported from coasts where the granite cliffs are exposed to frosts that, from time to time, sever the masses from the solid rock.

The conversion of this barren waste into a flourishing seaport town, with a fine harbour, was, of course, a work begun by Peter the Great; for what is there that is worthy of being preserved in this empire that had not its origin with Peter, whose successors indeed have completed almost without exception all that this extraordinary man commenced, while they have at the same time continued the policy that introduced Russia into the family of European nations.

Notwithstanding the breadth of either arm of the bay, that on the north side of the island is too full of rocks and shoals, and the channel too narrow, intricate, and shallow, to admit vessels of any considerable burden.

We saw, however, several sloops, possibly fishing-vessels, taking this course, while we stood upon the bastions. Upon the south side appear the same shoals and rocks; but the channel which here sweeps by the south-east point of the island, though intricate and narrow, is deep enough to admit the largest ships as far as the basin which forms the port.

Peter the Great erected fortifications both upon the island of Cronstadt, and upon other sites commanding the entrance to the bay by the south channel, from which have arisen a series of defensive works, which, aided by the natural position of the island, renders Cronstadt, if not, as it has been supposed by some, impregnable, at least one of the most formidable fortresses of modern times. Being encompassed by banks and shoals, and to be approached only by narrow channels, its position has afforded sites for many strong forts, of which no less than six have been erected upon shoals, sand-banks, and rocks lying even with, or below, the surface of the water, and within the crossfire from which every vessel of any considerable burden must pass.

From the mole upon which we were now standing, all the fortresses which defend the approaches to the Neva were under our view. At this point Fort Menschikoff rises above the barrier against the sea, with four tiers and 44 guns, which can rake the channel by which every vessel must approach. Immediately opposite this, on the south side of the channel, rises the great fort of Cronstatt, formed of granite and timber, from a small island at the extremity of the shoals stretching out from the shore on this side, and mounting 56 guns in casemates, and 32 in barbette (uncovered).

The next fort, west of the bay, is that of Peter I., which is seen rising out of the water in a similar manner to that of Cronstatt, and is built wholly of granite, and mounts 28 guns in casemates, and 50 in barbette. Beyond this, in the same manner, rises Fort Alexander, also of granite, and casemated, with four tiers, and 116 guns; and yet further west, is Fort Constantine, of 25 guns, in a single tier. The sixth fort is that of Risbank, built of granite and timber, and rising upon the south side of the channel; and, though yet unfinished, intended to mount 60 guns, in two tiers.

On the west side, the town is defended by ramparts and a deep ditch; and on the north, by ramparts and bastions, and twelve batteries; and at the north-east point, where the pier projects, by sixteen guns, in casemates. On the east, where there is but three feet of water within gun-range, there are ramparts, but no batteries.

The island itself is defended by a fort called Fort Peter, and by two batteries, all upon the south side, in the rear of the forts which guard the channel, and by Fort Alexander upon the north side, and by redoubts and lines near its extremity.

After spending some time upon the bastions, we re-embarked and rowed about among the merchant shipping. The basin was not crowded, but it was said to have about 600 vessels moored within its granite barrier, and it might probably, without inconvenience, hold double the number we saw there. There were ships bearing the flags of all the maritime nations, the English being predominant. Among the Danish vessels, there were a frigate and a steamer of war, both taking in grain like ordinary merchant-ships.

From the part of the harbour occupied by the merchant-ships, we rowed to another part of the same basin, which is called the middle harbour. This is appropriated to the men-of-war that are fitting out. It unites with the merchants' harbour, and has a dock attached to it, which the ships enter by a canal. Beyond this lies the proper haven for ships fitted for sea, which is called the "Orlogshamn." This is spacious enough to contain between thirty-five and forty line-of-battle ships. It is protected by a mole and bastions, independent of those of the common harbour.

After we had made this little survey of the harbour and fortifications of Cronstadt, we landed at a different part of the town from that at which we had embarked, and came immediately into the principal square which is called after the name of the great founder of all around, and has a statue of Peter in bronze on a pedestal of polished granite. From this, we directed our steps towards the Arsenal, where we saw 500 or 600 cannon, and equipments for ships of every

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